



eCOMMONS

Loyola University Chicago
Loyola eCommons

Psychology: Faculty Publications and Other Works

Faculty Publications and Other Works by Department

2015

SEL in Higher Education

Colleen S. Conley

Loyola University Chicago, cconley@luc.edu

Follow this and additional works at: https://ecommons.luc.edu/psychology_facpubs



Part of the [Educational Psychology Commons](#), [Higher Education Commons](#), and the [Psychology Commons](#)

Recommended Citation

Conley, Colleen S.. SEL in Higher Education. Handbook of Social and Emotional Learning : Research and Practice, , : 197-212, 2015. Retrieved from Loyola eCommons, Psychology: Faculty Publications and Other Works,

This Book Chapter is brought to you for free and open access by the Faculty Publications and Other Works by Department at Loyola eCommons. It has been accepted for inclusion in Psychology: Faculty Publications and Other Works by an authorized administrator of Loyola eCommons. For more information, please contact ecommons@luc.edu.



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 License](#).
© 2015, Guilford Press.

SEL in Higher Education

Colleen S. Conley

For nearly 20 years, researchers and practitioners of social and emotional learning (SEL) have aimed to determine the best practices available for intra- and interpersonal skills enhancement, problem prevention, health promotion, and positive development (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2012; Elias et al., 1997). Specifically, SEL scholars have identified the value of building five core competencies—self-awareness, self-management, responsible decision making, social awareness, and relationship skills—and have worked to promote these strengths through school-based programming (CASEL, 2003, 2012). Because these domains and competencies are relevant for the entire lifespan, SEL is not inherently tied to any particular educational context or developmental period. To date, however, the theoretical and empirical literature on SEL has focused primarily on preschool through secondary school students, and guidelines for SEL practices routinely mention goals and applications for these student populations (CASEL, 2003; Greenberg et al., 2003; Zins, Weissberg, Wang, & Walberg, 2004). In contrast, the SEL framework has not yet been applied to higher education populations and settings. Certainly, SEL education is of prime importance for children in that it can chart a positive developmental trajectory during an early, formative period of life. Yet

the need for SEL does not end in high school. The case can easily be made that the mission of higher education institutions, similar to those of primary and secondary schools, “is to educate students to be knowledgeable, responsible, socially skilled, healthy, caring, and contributing citizens” (Greenberg et al., 2003, p. 466; also see Seal, Naumann, Scott, & Royce-Davies, 2010). Likewise, similar to the research on the academic benefits of SEL for youth (Zins, Bloodworth, Weissberg, & Walberg, 2004), research in higher education populations demonstrates that social and emotional adjustment is associated with positive academic outcomes, including academic performance and retention (Gloria & Ho, 2003). Furthermore, social and emotional skills are associated with benefits extending beyond academic contexts and outcomes, such as success in work, positive interpersonal relationships, and better mental health and overall well-being (Bar-On, Handley, & Fund, 2006; Jordan & Ashkanasy, 2006; Lopes, Salovey, Côté, & Beers, 2005; Mayer, Salovey, & Caruso, 2004). Thus, the value of SEL is vital in higher education.

There is a growing literature on mental health promotion and prevention for higher education students, and many of these programs focus on social and emotional outcomes (for reviews, see Conley, Durlak, & Dickson, 2013; Conley, Durlak, & Kirsch,

in press). Although these programs have not yet been conceptualized within an SEL framework, they share many of the same elements and target similar aspects of social and emotional learning as SEL programs for youth. This chapter reviews this literature in the context of SEL and offers suggestions for future research and practice addressing SEL in higher education.

Theoretical and Empirical Background: Expanding SEL to Higher Education

Decades of theoretical work document the higher education years as a formative developmental period (e.g., Astin, 1984; Evans, Forney, Guido, Patton, & Renn, 2009) and note the various social, emotional, and academic challenges that place substantial strain on students' mental health and adjustment (Howard, Schiraldi, Pineda, & Campanella, 2006; McDonald, Pritchard, & Landrum, 2006). Higher education settings typically present students with less structure, more demands, new roles, and increased pressures, contributing to their struggles with stress, distress, and adjustment difficulties. Indeed, a substantial body of research on higher education students documents that stress, maladjustment, and mental health problems are high among this population, compared to developmental and clinical norms (Stallman, 2010; Stewart-Brown et al., 2000).

The social and emotional skills that are most relevant to higher education students are those that can promote their personal and interpersonal awareness and competence, and therefore help them navigate new and challenging academic, social, and emotional terrain. Promoting these competencies, in turn, is likely to curb problems or maladjustment in emotional and social domains. Thus, SEL competencies are valuable both as aspects of positive adjustment and for their ability to forestall related aspects of negative adjustment. The following list, adapted from CASEL (2003, p. 5; 2012, p. 9), applies the five core SEL competencies to higher education populations:

- *Self-awareness*: Accurately recognizing one's thoughts and emotions, and their influence on behaviors; accurately

assessing one's strengths and limitations; possessing a well-grounded sense of self-esteem, self-efficacy, self-confidence, perceived control, and optimism.

- *Self-management*: Effectively regulating one's thoughts, emotions, and behaviors; managing stress; savoring emotional well-being; successfully engaging in skills such as coping, problem solving, mindfulness, relaxation, and positive and productive thinking.
- *Social awareness*: Identifying appropriate social resources and supports; displaying accurate perspective taking, respect for others, and empathy.
- *Relationship skills*: Establishing and maintaining healthy relationships; seeking and providing help when needed; communicating effectively; negotiating conflict constructively; solving interpersonal problems.
- *Responsible decision making*: Making constructive, responsible, and ethical choices that promote self and other well-being; effectively managing goals, time, and tasks.

In higher education settings, the structure and support of predetermined school schedules, parental monitoring, and family routines typically give way, shifting from externally to internally focused responsibility, which in turn emphasizes the need for students' continual use of skills such as self-awareness, self-management, and responsible decision making. Socially, the transition to higher education often involves forging new relationships with roommates, an entirely new peer group, and a faculty and staff who serve *in loco parentis*. Thus, higher education students also experience a heightened need for social awareness and relationship skills. Indeed, research has demonstrated that social and emotional competencies in these five SEL domains are critical to higher education students' development, adjustment, and success. For example, students with positive self-awareness and self-perceptions appear to adapt most successfully in higher education contexts (e.g., Ramos-Sanchez & Nichols, 2007). Similarly, self-management skills have beneficial effects for students' personal and emotional adjustment, as well as their academic and cognitive performance (e.g., Deckro et

al., 2002; Palmer & Roger, 2009; Parker, Duffy, Wood, Bond, & Hogan, 2005). In contrast, poor self-management can lead to symptoms of emotional distress, such as depression, anxiety, and stress, which are consistently noted among the most prevalent and challenging adjustment problems facing higher education students (Adlaf, Gliksman, Demers, & Newton-Taylor, 2001; American College Health Association, 2011; Bayram & Bilgel, 2008), and can have detrimental effects on academic functioning and retention (Pritchard & Wilson, 2003). Furthermore, because social skills, social support, and social stress are key elements of adjustment in higher education (Gerdes & Mallinckrodt, 1994), *social awareness* and *relationship skills* are essential for successful navigation in this context (Hefner & Eisenberg, 2009; Tao, Dong, Pratt, Hunsberger, & Pancer, 2000). Finally, research in higher education settings demonstrates the importance of *responsible decision making*, with regard to both curricular (e.g., academic goals and study skills; Robbins et al., 2004) and extracurricular (e.g., substance use; Wolaver, 2002) behaviors. In summary, helping students to develop strengths and assets that promote their social and emotional well-being seems to be just as worthwhile an investment in higher education as it is in earlier educational contexts.

Scope of This Chapter

This chapter reviews published and unpublished evaluations of 113 SEL-related prevention and promotion programs that were conducted in higher education settings (i.e., 2- or 4-year colleges and universities, trade and vocational schools, and graduate and professional programs such as medical school or law school). (A complete list of all programs reviewed in this chapter, categorized by program type and success status, is available from the author.) In particular, this chapter focuses on universal prevention or promotion programs rather than those targeted at students with established or early-identified problems. Furthermore, this review focuses on programs that assessed one or more the following SEL outcomes—emotional distress, self-perceptions, social-emotional skills, and relationships

with others—as these are the most commonly assessed social and emotional outcomes in higher education that map onto similar research on younger students (e.g., Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Greenberg, Domitrovich, & Bumbarger, 2001). Finally, although several interventions for higher education students are geared toward reducing substance use, sexual assault, body dissatisfaction, and eating disorders (for reviews, see Anderson & Whiston, 2005; Carey, Scott-Sheldon, Carey, & DeMartini, 2007; Yager & O’Dea, 2008), this review focuses on programs that target higher education students’ *general* social and emotional well-being.

Conley and colleagues (2013) reviewed a similar body of research to assess the methodology and impact of higher education interventions on various social and emotional, as well as academic and health-related, outcomes. This chapter reconceptualizes this body of research within an SEL framework, using a slightly different study sample, and focuses specifically on the social and emotional outcomes achieved by these interventions. Furthermore, this chapter summarizes the impact of these programs in a different way, as described below.

Current Research: Overview of Strategies

Methodological Issues

The programs reviewed here were evaluated in designs that include a control group and involved quantitative assessment of outcomes that fell into one or more of the following categories: emotional distress, social and emotional skills, self-perceptions, and relationships with others. Another inclusion criterion for this review was that the program needed to continue for more than one session, outside of suggested home practice.

Intervention Types

Because the research on promoting social and emotional competencies in higher education has not yet been organized within an SEL framework or promoted as a focus for systematic programming or policy (in contrast to that for younger populations;

CASEL, 2012), these interventions tend not to be as organized, structured, or uniform as the model SEL programs for youth. CASEL (2012) has identified several “SElect” programs for preschool and elementary students that address all five of the CASEL competencies and provide multiple opportunities to practice and develop skills, both within the program and in real-life situations, over multiple years. In contrast, the social and mental health promotion programs for higher education populations typically address some, but not all, of the SEL core competencies and are usually brief (i.e., lasting only a few weeks and rarely extending beyond one semester).

Despite the lack of systematic organization in the research promoting social and emotional competencies in higher education, there are some common categories that emerge from these interventions. *Psychoeducational* programs are interventions that primarily provide didactic information to participants on topics such as stress, coping, and ways to relax. The didactic content of these programs varies, but they are unified by their assumption that providing information, rather than building skills, will improve students’ adjustment. Among the *skills-oriented programs* are the five main categories described below. Although the terminology used to describe these interventions differs from the typical terminology in SEL programming for youth, the practical elements and intended outcomes of these programs are quite similar. To illustrate the connections between youth SEL programs and higher education promotion programs, the social and emotional skills most commonly emphasized in each program category are noted in Table 13.1 on pages 202–203 and are briefly described here:

- *Cognitive-behavioral* interventions tend to emphasize self-awareness and self-management skills such as monitoring and modifying cognitions in order to change emotional and behavioral reactions. They also frequently employ techniques to enhance social awareness, relationship skills, and responsible decision making.
- *Meditation* interventions encompass a variety of meditation techniques intended to enhance self-awareness and self-management skills.

- *Mindfulness* interventions primarily target self-awareness and self-management skills, with some focus also on social awareness and relationship skills, by training the mind to function in a mode of moment-to-moment awareness, acceptance, nonjudgment, and compassion.
- *Relaxation* interventions target self-awareness and self-management strategies designed to teach students how to relax, such as progressive muscle relaxation, breathing techniques, or guided imagery.
- *Social skills* interventions focus primarily on social awareness and relationship competencies, with the aim of improving skills such as assertiveness, communication, and conflict management.

One notable finding from the SEL literature on younger populations is that skills-oriented preventive programs tend to have much greater success than psychoeducational or purely didactic programs (Durlak, 1997; Durlak, Schellinger, Weissberg, Dymnicki, & Taylor, 2011; Greenberg et al., 2001). The literature suggests this is a function of these programs, including multiple opportunities for participants to practice and then apply the skills they are learning effectively (Gresham, 1995). In the mental health promotion and prevention research on higher education populations, interventions with such supervised skills practice were found to be seven times more likely to yield significant outcomes compared to psychoeducational-only programs, and five times more likely to yield significant outcomes compared to other skills-oriented interventions that did not include supervised practice (Conley et al., 2013). SEL researchers and theorists also have noted the importance of skills practice, both within an intervention program and in their applications to real-life situations, to allow for skills development over time (CASEL, 2012). Following these recommendations and existing evidence, this chapter separately reviews skills-building interventions that incorporate supervised skills practice.

Outcomes Evaluated

As noted earlier, this review focuses on four main social and emotional outcome areas. *Emotional distress* outcomes pre-

dominantly include depression, anxiety, or stress, as well as general psychological distress or well-being. *Social and emotional skills* outcomes include different types of cognitive, affective, and social skills, such as effective coping techniques, mindfulness, rational beliefs, emotional awareness and management, relaxation strategies, assertiveness, and other communication skills. *Self-perception* outcomes primarily include self-esteem and self-efficacy, and also some assessments of self-compassion, sense of control or agency, optimism, and resilience. *Interpersonal relationship* outcomes include assessments of relationship quality and satisfaction, social support and adjustment, and patterns of conflict and communication with others.

Review of Research Findings

Given the large body of research it reviews, this chapter utilizes a high criterion for success, in order to yield a selective subset of interventions from which to make recommendations for future research and practice. Specifically, a *successful trial* is one in which intervention participants, compared to controls, evidenced statistically significant benefits ($p \leq .05$) on *at least half* of the study's assessed outcomes in social and emotional domains. An *unsuccessful trial* is one in which *less than half* of these assessed outcomes demonstrate benefits.

Given the large amount of research on higher education students, this review only considers interventions that have been evaluated in at least three trials, and applies more stringent criteria than might be used for populations and interventions in which fewer trials are available. Following the same initial method as the other chapters in this book's section on *Evidence-Based Programming*, *what works* includes interventions that have had at least three successful trials in promoting social and emotional learning. However, because of the large number of studies on higher education students, an additional criterion was added, based on the percentage of successful trials that were obtained by the different types of interventions. To be included in the category of *Programs that Work*, more than 66% of the trials for that intervention category had

to be successful (i.e., achieve significance on at least half of the social and emotional outcomes). In other words, for programs that work, the odds had to be at least two to one that successful trials were achieved by that intervention category. The *What Is Promising* category included interventions with successful trials occurring between 33 and 66% of the time. The *What Does Not Work* category included interventions in which less than 33% of trials involving social and emotional outcomes were successful. In other words, among all the trials of that particular type of intervention, the odds were at least two to one *against* the program achieving a successful trial. Based on previous research findings with youth (Durlak, 1997) and higher education populations (Conley et al., 2013, in press), this review separates interventions with supervised skills practice from those without this important element.

What Works: Mindfulness

To date, only one intervention category for higher education students meets the stringent criteria for *what works*. The evidence is clear that mindfulness interventions with supervised skills practice work as a primary prevention and promotion strategy for enhancing social and emotional adjustment in higher education students. Notably, seven of the nine reviewed mindfulness interventions (78%) were successful trials that at postintervention yielded improvements in emotional distress, self-perceptions, and/or social-emotional skills (none of these studies assessed interpersonal relationships; Astin, 1997; Hoffmann Gurka, 2005; Oman, Shapiro, Thoresen, Plante, & Flinders, 2008; Rosenzweig, Reibel, Greeson, Brainard, & Hojat, 2003; Sears & Kraus, 2009; Shapiro, Brown, & Biegel, 2007; Shapiro, Oman, Thoresen, Plante, & Flinders, 2008; Shapiro, Schwartz, & Bonner, 1998). Notably, one of the trials without positive results at postintervention did demonstrate later success at the 4-month follow-up, with program participants evidencing gains over controls in both depression and stress (Leggett, 2010). The other unsuccessful trial demonstrated significant pre-post effects (with medium to large effect sizes; d ranged from 0.52 to 2.63) for all assessed outcomes in the intervention group, but none of the out-

TABLE 13.1. Skills Commonly Targeted in Higher Education Interventions in Relation to Core SEL Competency Domains

General type of intervention	SEL competency domains				
	Self-awareness	Self-management	Social awareness	Relationship skills	Responsible decision making
Cognitive-behavioral	<ul style="list-style-type: none"> Recognizing triggers of stress and distress Identifying automatic thoughts Identifying positive self-statements Scheduling pleasant events Self-affirmations 	<ul style="list-style-type: none"> Stress management, reduction, inoculation Cognitive modification or restructuring; challenging distortions; generating counterarguments to negative self-statements; increasing positive self-talk Coping skills training Relaxation (see Relaxation, below) 	<ul style="list-style-type: none"> Using social support to reduce stress and enhance well-being 	<ul style="list-style-type: none"> Social skills (see Social Skills, below) 	<ul style="list-style-type: none"> Taking steps to reduce stress Modifying maladaptive behavior Goal setting; time management
Meditation	<ul style="list-style-type: none"> Focusing attention on a single item (e.g., one's breath; a sound, object, or body part; the passing of one's thoughts) 	<ul style="list-style-type: none"> Passively disregarding distracting thoughts or sensations, gently returning the mind to the original object or thought Relaxation exercises, including breathing and body scan 	<ul style="list-style-type: none"> <i>Generally not covered</i> 	<ul style="list-style-type: none"> <i>Generally not covered</i> 	<ul style="list-style-type: none"> <i>Generally not covered</i>
Mindfulness	<ul style="list-style-type: none"> Awareness of sensory experiences, somatic sensations, thoughts, feelings, and behaviors 	<ul style="list-style-type: none"> Mindfulness (bringing attention to the present moment, nonjudgmentally) Mindful approaches to everyday 	<ul style="list-style-type: none"> Other-directed "loving-kindness": 	<ul style="list-style-type: none"> Mindfulness in relationships (e.g., mindful listening, empathy) 	<ul style="list-style-type: none"> <i>Generally not covered</i>

	<ul style="list-style-type: none"> • Self-acceptance (accepting “whatever arises”) • Self-directed “lovingkindness” (compassion, friendliness, joy, peacefulness) 	<p>practices and experiences such as work, school, stress, pain, suffering</p> <ul style="list-style-type: none"> • Patience, letting go, slowing down, detachment • Relaxation; stress reduction 	<p>friendliness, compassion, joy, peacefulness</p>		
Relaxation	<ul style="list-style-type: none"> • Awareness of bodily sensations related to stress and relaxation 	<ul style="list-style-type: none"> • Breathing techniques (e.g., slow, deep breathing) • Bodily relaxation (progressive muscle relaxation, autogenic training, cue-controlled relaxation) • Mental relaxation (e.g., guided imagery) 	<ul style="list-style-type: none"> • <i>Generally not covered</i> 	<ul style="list-style-type: none"> • <i>Generally not covered</i> 	<ul style="list-style-type: none"> • <i>Generally not covered</i>
Social skills	<ul style="list-style-type: none"> • Recognizing filters that impair good communication 	<ul style="list-style-type: none"> • Effectively dealing with filters to improve communication 	<ul style="list-style-type: none"> • Recognizing risk factors for relationship dysfunction and distress • Listening with understanding 	<ul style="list-style-type: none"> • Communication • Assertiveness • Relationship problem solving • Conflict management and resolution • Enhancing positive aspects of relationships 	<ul style="list-style-type: none"> • <i>Generally not covered</i>

Note. Terms in the table are drawn directly from the authors of the intervention studies. Individual programs within each intervention category vary in the specific skills they emphasize and do not always encompass every skill listed here. Some items that overlap into multiple areas of SEL competency domains are listed in the most central area.

comes in the control group; yet likely due to small sample sizes (10 intervention and six control participants) the between-group differences posttreatment did not reach statistical significance (Lynch, Gander, Kohls, Kudielka, & Walach, 2011).

The success of mindfulness interventions for improving SEL in higher education students seems attributable both to content and structural elements. As listed in Table 13.1, these interventions typically cultivate skills in self-awareness (including awareness of sensory and somatic experiences, thoughts, emotions, and behaviors; self-acceptance; self-compassion), self-management (including mindfulness, patience, relaxation, and stress management), social awareness (e.g., compassion toward others), and relationship skills (including mindfulness in relationships, mindful listening, and empathy). Furthermore, these interventions generally aim to cultivate mindfulness in a broad way, through skills and practices, as well as motivation and attitudes (e.g., Oman et al., 2008; Shapiro et al., 2008). Typically, mindfulness interventions call on participants to apply their newly learned skills to multiple aspects of their everyday lives (e.g., encouraging mindfulness in relationships, at school, and at work; taking a mindful approach to eating; engaging in mindful approaches to stress). Given their emphasis on incorporating a broad array of SEL-related competencies into daily life, it is not surprising that mindfulness programs yield benefits for emotional distress (including depression, anxiety, stress, general emotional wellness, affect, and mood), social-emotional skills (including higher levels of mindfulness, rational beliefs, empathy, and forgiveness, and lower levels of rumination), and self-perceptions (including heightened self-compassion, sense of control, and hope).

Beyond the content of these interventions, several structural elements are notable as well. These mindfulness interventions are manualized, using session protocols based either on Kabat-Zinn's (1982, 1990) mindfulness-based stress reduction or Easwaran's (1978, 1991) Eight-Point Program. A typical mindfulness session includes a *didactic element* with formal instruction of a mindfulness meditation or practice (e.g., sitting meditation, passage meditation, breath awareness, body scan, mindful move-

ment, loving-kindness meditation, mindful stretching, or hatha yoga), as well as an *experiential element* that involves practicing the skills in session, and encouraging students to practice outside of session as well (typically with provided audio recordings and practice logs). The success of mindfulness programs is impressive given their brevity. Interventions ranged from 3 to 10 weekly sessions, lasting 1–3 hours each, yielding an average of approximately 30 hours total intervention time.

What Is Promising

Three intervention categories meet criteria as *promising*. Although further research is needed, cognitive-behavioral, relaxation, and social skills interventions show some promise in improving social and emotional outcomes in higher education students.

Cognitive-Behavioral Interventions

Cognitive-behavioral interventions with supervised skills practice satisfy the *what is promising* criteria for promoting social and emotional benefits in higher education students. Among the 30 reviewed interventions, 18 (60%) meet the criteria for a successful trial. Cognitive-behavioral interventions are somewhat variable in their methods, but they typically follow a manualized protocol or structured framework (e.g., Beck, Emery, & Greenberg, 1985; Burns, 1999; Ellis, 2001; Meichenbaum, 1985). As listed in Table 13.1, these interventions promote skills in the self-awareness and self-management categories, such as recognizing triggers of stress and distress, identifying automatic thoughts and self-statements, modifying or restructuring cognitions, improving coping skills, relaxing, and managing or reducing stress. Some cognitive-behavioral interventions for higher education students also address social awareness and relationship skills (e.g., using social support to enhance personal well-being, and improving social skills) and responsible decision making (e.g., taking steps to reduce stress, modifying maladaptive behaviors, setting goals and improving time management, and making healthy lifestyle choices).

An illustrative example of a successful cognitive-behavioral intervention, designed

to reduce stress and distress in college students, was reported by Deckro and colleagues (2002). This 6-week, skills-based intervention emphasized many of the social and emotional learning competencies noted in Table 13.1, particularly in the categories of self-awareness (including awareness of thoughts, bodily sensations, and their connection), self-management (including challenging cognitive distortions, relaxation, stress management, coping), and responsible decision making (including goal setting). This intervention was manualized (both trainers and students had manuals to guide their practice), and each session included a mix of the following elements: (1) lecture, discussion, and demonstration of new material, (2) review of weekly skills practice, and (3) supervised practice of the targeted skills. Facilitators encouraged skills practice outside of session, providing students with a manual and guided audio files for completing the exercises, sending weekly e-mail reminders about skills practice, and asking students to complete daily logs of practice. Ultimately, the skills were intended to be integrated into students' lives on a regular basis.

Across the 18 identified successful cognitive-behavioral interventions, several areas of social and emotional outcomes have yielded significant benefits, in the categories of emotional distress (including depression, suicidality, anxiety, stress, negative vs. positive affect, general psychological distress, emotional well-being), self-perceptions (including self-esteem, self-concept of academic ability, self-actualization, optimism), social and emotional skills (including coping, positive thinking styles, emotional awareness and management, relaxation, stress management, trust), and interpersonal relationships (including social awareness, communication patterns, conflict resolution). Despite this success, it is important to note that 12 of the 30 cognitive-behavioral interventions failed to meet the criteria for a successful trial. Future research should aim to clarify what makes some of these interventions successful and others not.

Relaxation Interventions

This review identified 12 relaxation interventions with supervised skills practice,

and six (50%) were successful. The successful interventions utilized a variety of relaxation methods, including autogenic training (Kanji, White, & Ernst, 2006), progressive muscle relaxation (Lyons & Lufkin, 1967), biofeedback (Ratanasiripong, Ratanasiripong, & Kathalae, 2012; Turner, 1991), relaxing breathing exercises (Baker, 2012), or a combination of such methods (Charlesworth, Murphy, & Beutler, 1981). As reported by Kanji and colleagues (2006), autogenic training included six standard exercises focused on (1) muscular relaxation, (2) feeling warm, (3), calming cardiac activity, (4) slowed respiration, (5) warmth in the abdominal region, and (6) coolness in the head. Progressive muscle relaxation entails tensing then relaxing a series of muscle groups, noting the feelings of warmth, heaviness, and relaxation. The biofeedback interventions trained students to monitor and modulate their basic physiological responses to stress, such as their heart rate, muscle tension, or skin temperature. As noted in Table 13.1, these and related relaxation techniques primarily target self-awareness and self-management, specifically by raising awareness of bodily sensations related to stress and relaxation, and by inducing bodily and mental relaxation. Accordingly, these relaxation interventions focused on assessing emotional distress outcomes (e.g., anxiety, stress, tension), and the three successful trials found relaxation to have a significant impact on physiological indicators of stress (including blood pressure, pulse, and an electromyographical measure of tension) and on self-reports of anxiety and stress.

Although these six successful trials are promising, this review also identified six unsuccessful trials. Further research is needed to account for the mixed success of relaxation programs in higher education settings.

Social Skills Interventions

Out of five social skills interventions with supervised skills practice, two (40%) were successful (Braithwaite & Fincham, 2007; Waldo, 1982). Although they were similar in their focus on enhancing social skills through behavioral interventions (see Table 13.1), their specific methods differed suf-

ficiently to warrant describing both interventions here. Waldo (1982) administered a relationship skills workshop designed to enhance positive communication between roommates, including “listening with understanding and offering honest self-disclosure during difficult interpersonal situations” (p. 5). Through a combination of lectures, demonstrations, readings, written reports, and, most notably, “structured experiences designed to foster a supportive interpersonal environment” (p. 5), the intervention provided opportunities to develop competence in “valuè clarification, communication and conflict resolution” (p. 5). Compared to controls, intervention participants showed significantly enhanced levels of positive communication with roommates postintervention.

Braithwaite and Fincham (2007) administered ePREP, a computer-based intervention based on the Prevention and Relationship Enhancement Program (Markman, Stanley, & Blumberg, 2001), an empirically validated approach to improving romantic relationship quality. Through self-paced content delivered in slide format, participants learned about communication and conflict-management techniques, and interpersonal problem-solving skills. An important aspect of supervised skills practice, participants took quizzes to ensure mastery of the material. After completing the intervention, participants received a printed copy of the material, as well as weekly reminder e-mails to prompt and assess their implementation of the targeted skills. Following the intervention, participants evidenced benefits in six out of 10 outcomes across the SEL domains of emotional distress (i.e., lower levels of depression, anxiety, and negative affect, but not higher levels of positive affect), social and emotional skills (higher levels of trust), and interpersonal relationships (lower levels of psychological aggression and physical assault during conflict, but not higher levels of negotiation during conflict, and no significant differences in relationship satisfaction or in constructive communication patterns). Of note, the authors replicated the ePREP intervention twice more (Braithwaite & Fincham, 2009, 2011) but found weaker support in these replications. The 2009 trial utilized latent growth curve modeling to determine benefits over time,

including both postintervention (8 weeks) and follow-up (10 months). These models yielded only one (of seven) significant group effect (intervention vs. control) on social and emotional outcomes: specifically, the intervention seemed to impact anxiety but not depression, constructive communication, relationship satisfaction, or the three conflict resolution skills noted earlier. However, the authors point out strong effect sizes (range 0.36 to 2.69) in seven of the 10 outcomes at the 10-month follow-up assessment. Furthermore, the 2011 trial found some support for enhancing social and emotional outcomes in women only (in four of 10 outcomes assessed) or in men only (in two of 10 outcomes assessed). Although further research is needed to sort out the mixed pattern of findings, the ePREP intervention does seem to offer promise for enhancing social and emotional competencies in higher education populations.

What Does Not Work

Three intervention categories meet criteria as *what does not work*, as empirical evaluations to date have demonstrated them to be ineffective in the majority (67% or more) of evaluated trials. As detailed below, the evidence appears to argue against the social and emotional benefits of (1) meditation interventions, (2) interventions that emphasize skills but do not contain supervised practice of these skills, and (3) psychoeducational interventions that focus on didactics rather than skills.

Meditation

This review identified six meditation interventions with supervised skills practice, but only one of these (17%) was successful (i.e., produced benefits in half or more of the assessed social and emotional outcomes—in this one case, for perceived stress, state and trait anxiety; Baker, 2012). Meditation practices, such as transcendental or concentration meditation, aim to focus participants’ attention on a single item (e.g., a sound, object, or body part; one’s breath, or the passing of one’s thoughts) and passively disregard other distracting thoughts or sensations, gently refocusing the mind on the intended object or thought (see Winzel-

berg & Luskin, 1999). These practices are theorized to improve stress management via physiological effects (e.g., reducing arousal and inducing relaxation). Although there is some evidence that meditation has beneficial effects for reducing arousal and anxiety in adults and in some medical patients (for reviews, see Eppley, Abrams, & Shear, 1989; Smith, 1975), the existing research on the social and emotional benefits in higher education populations does not sufficiently document that it is an effective technique for improving social and emotional outcomes. Specifically, the preponderance of studies reviewed here found a lack of significant impact, or mixed findings at best, for several examined SEL benefits, including reducing emotional distress (anxiety, stress, general distress vs. well-being), enhancing self-perceptions (e.g., self-efficacy), and improving social and emotional skills (e.g., coping) (Fulton, 1990; Kindlon, 1983; Moss, 2003; Winzelberg & Luskin, 1999; Zuroff & Schwarz, 1978).

Interventions without Supervised Skills Practice

This review identified 23 skills-oriented programs without supervised practice, but only five (22%) were successful (Abel, 2005; Epstein, Sloan, & Marx, 2005; Grassi, Preziosa, Villani, & Riva, 2007; Heaman, 1995; Winterdyk et al., 2008). Furthermore, among the 18 unsuccessful programs, 13 failed to obtain significant effects on *any* social and emotional outcomes. Given that these interventions are nearly four times more likely to be unsuccessful rather than successful, interventions that do not incorporate supervised skills practice do not appear to work, or even be promising, for promoting social and emotional adjustment in higher education populations. No distinguishing features emerged to set apart the five successful programs, compared to the 18 unsuccessful ones, in terms of intervention type or programmatic features (e.g., sample, design, format, length of exposure, delivery format). Thus, although these programs as a whole include an important element of focusing on skills, their lack of supervised practice over multiple sessions seems to limit their ability to yield social and emotional benefits.

Psychoeducational Interventions

Of the 28 psychoeducational (didactic, not skills-oriented) interventions identified for this review, only four (14%) meet criteria for being successful (Jones, 2004; MacLeod, Coates, & Hetherington, 2008; Mattanah et al., 2010; Walker & Frazier, 1993). In other words, psychoeducational interventions are six times more likely to be unsuccessful as successful. Additionally, of the 24 unsuccessful trials, 17 demonstrated no significant benefits on any of their assessed social and emotional outcomes. Thus, psychoeducational interventions do not appear to realize the intended impact of achieving social and emotional benefits in higher education populations. It is not surprising that, on the whole, programs that do not focus on skills development tend not to yield successful social and emotional outcomes because this same finding has appeared in interventions for both higher education students (Conley et al., 2013) and younger populations (Durlak, 1997; Durlak et al., 2011; Greenberg et al., 2001).

Summary and Recommendations for Future Research and Practice

Although the concept of social and emotional learning has not previously been applied to higher education settings, there are many mental health promotion and prevention programs that can be considered successful or promising in enhancing social and emotional development in higher education students, extending findings for primary and secondary school students (in this volume, see Jagers, Harris, & Skoog, Chapter 11; Rimm-Kaufman & Hulleman, Chapter 10; Williamson, Modecki, & Guerra, Chapter 12). As with the literature on SEL for youth, not all programs in higher education are equally effective. Among skills-oriented programs with supervised practice, one intervention type—mindfulness—emerges as clearly effective, and three others—cognitive-behavioral, relaxation, and social skills interventions—show promise. A fifth category, meditation programs, appears to be ineffective for improving social and emotional adjustment in higher education settings.

Cutting across the topical focus of programs, two categories of interventions appear not to work for enhancing social and emotional learning in higher education students. Skills-oriented programs without a supervised practice component do not effectively improve social and emotional adjustment. Furthermore, psychoeducational programs that do not emphasize skills but instead focus on didactic information are unsuccessful in producing social and emotional benefits in nearly all cases. In summary, just as with SEL programs for school-age youth (Botvin, 2000; Durlak et al., 2011; Lösel & Beelmann, 2003), supervised skills practice appears to be one central component for successfully promoting social and emotional development in higher education students.

Although the current findings are encouraging, it is important to note that this review evaluated effectiveness immediately following the intervention period. Only about one-third of the programs included in this review assessed outcomes at a follow-up period, and these were usually of short duration. Thus, further research is needed to evaluate the long-term impact of SEL programs in higher education. Beyond the demonstrated importance of supervised skills practice, further research is needed to examine the active components and mechanisms accounting for the success of some programs but not others. For example, mediation analyses can clarify whether gains in different SEL skills are responsible for program outcomes. Research also is needed to *compare* different types of SEL interventions in higher education to determine their relative impact for different types of students and delivery formats. For example, first-year orientation programs are common on college campuses, but little research has investigated their potential impact on social and emotional functioning, and the research that does exist rarely includes the important element of supervised skills practice.

To date, programs that promote social and emotional competencies in higher education tend to be researcher-initiated, relatively brief interventions that are disconnected from the institutions' curricula, staff, and goals. An important next step for SEL in higher education is to extend promising research findings into everyday practice by

integrating successful SEL interventions into higher education institutions and curricula programmatically. Following important implementation guidelines from SEL researchers and practitioners, this would include being (1) institution-initiated and designed to meet the specific needs of that institution; (2) coordinated within the institution's existing curricula and programming in an ongoing, systematic way; (3) supported by school administrators and leadership, and performed in collaboration with key institutional staff; and, finally, (4) carefully monitored and evaluated over time to enhance program improvement and sustainability (CASEL, 2012; Greenberg et al., 2003; Zins, Bloodworth, et al., 2004; Zins & Elias, 2006).

To take initial steps toward implementing best practices, higher education personnel must first agree on the value and role of social and emotional, as well as academic, learning. Administrators can draw on many of the existing structural features in higher education settings that lend themselves to systematic SEL programming in order to establish mechanisms for implementing and supporting institutionwide SEL initiatives. A critical element in this process is to coordinate "systems of support" (Zins & Elias, 2006, p. 2) to develop SEL goals for the institution, and to implement and monitor suitable programs to meet these goals. Key players in higher education include student representatives, institutional administrators, and frontline staff from across the university community, including student development, counseling and health centers, and academic departments with related interests such as psychology and health education. The tools and platforms for delivering successful programs should include both curricular and cocurricular offerings. This review identified several successful programs that were offered as elective classes, and these seemed to be successful in attracting students. Developing courses that promote SEL within the *core* (not just elective) curriculum, such as through required first-year seminars, would reach more students and provide SEL benefits on a broader scale. Incorporating SEL into co-curricular offerings, such as new-student orientation and residence hall programming, also would expose more students to skills that will help them manage the chal-

lenges of navigating the higher education environment.

This review of SEL interventions suggests the value of systematically integrating SEL into higher education settings. Working together, SEL researchers and higher education practitioners can coordinate institutions' goals and existing programs with evidence-based SEL interventions such as those reviewed here. Ultimately, these efforts can promote social and emotional learning in this important developmental period and context.

Acknowledgments

Special thanks to Joseph Durlak, Daniel Dickson, Alexandra Kirsch, Alison Stoner, and my team of fabulous research assistants for their contributions to this chapter.

References

- Abel, H. S. (2005). *The evaluation of a stress management program for graduate students*. Unpublished doctoral dissertation, Texas A&M University, Corpus Christi, TX. Retrieved from ProQuest Dissertations and Theses (www.proquest.com).
- Adlaf, E. M., Gliksman, L., Demers, A., & Newton-Taylor, B. (2001). The prevalence of elevated psychological distress among Canadian undergraduates: Findings from the 1998 Canadian campus survey. *Journal of American College Health, 50*(2), 67–72.
- American College Health Association. (2011). *American College Health Association–National College Health Assessment II: Reference Group Data Report Spring 2011*. Hanover, MD: Author.
- Anderson, L. A., & Whiston, S. C. (2005). Sexual assault education programs: A meta-analytic examination of their effectiveness. *Psychology of Women Quarterly, 29*(4), 374–388.
- Astin, A. J. (1997). Stress reduction through mindfulness meditation: Effects on psychological symptomatology, sense of control, and spiritual experiences. *Psychotherapy and Psychosomatics, 66*(2), 97–106.
- Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 25*(4), 297–308.
- Baker, N. C. (2012). *Does daily meditation or coherent breathing influence perceived stress, stress effects, anxiety, or holistic wellness in college freshmen and sophomores?* Unpublished doctoral dissertation, Boston College. Retrieved from ProQuest Dissertations and Theses (www.proquest.com).
- Bar-On, R., Handley, R., & Fund, S. (2006). The impact of emotional intelligence on performance. In V. U. Druskat, F. Sala, & G. Mount (Eds.), *Linking emotional intelligence and performance at work* (pp. 3–19). Mahwah, NJ: Erlbaum.
- Bayram, N., & Bilgel, N. (2008). The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Social Psychiatry and Psychiatric Epidemiology, 43*(8), 667–672.
- Beck, A. T., Emery, G., & Greenberg, R. L. (1985). *Anxiety disorders and phobias: A cognitive perspective*. New York: Basic Books.
- Botvin, G. J. (2000). Preventing drug abuse in schools: Social and competence enhancement approaches targeting individual-level etiologic factors. *Addictive Behaviors, 25*(6), 887–897.
- Braithwaite, S. R., & Fincham, F. D. (2007). ePREP: Computer based prevention of relationship dysfunction, depression, and anxiety. *Journal of Social and Clinical Psychology, 26*(5), 609–622.
- Braithwaite, S. R., & Fincham, F. D. (2009). A randomized clinical trial of a computer based preventive intervention: Replication and extension of ePREP. *Journal of Family Psychology, 23*(1), 32–38.
- Braithwaite, S. R., & Fincham, F. D. (2011). Computer-based dissemination: A randomized clinical trial of ePREP using the actor partner interdependence model. *Behaviour Research and Therapy, 49*(2), 126–131.
- Burns, D. D. (1999). *Feeling good: The new mood therapy*. New York: Avon Books.
- Carey, K. B., Scott-Sheldon, L. A., Carey, M. P., & DeMartini, K. S. (2007). Individual-level interventions to reduce college student drinking: A meta-analytic review. *Addictive Behaviors, 32*(11), 2469–2494.
- Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H. S., & Hawkins, J. D. (2004). Positive youth development in the United States: Research findings on evaluations of positive youth development programs. *Prevention and Treatment, 5*(1), 98–124.
- Charlesworth, E. A., Murphy, S., & Beutler, L. E. (1981). Stress management skill for nursing students. *Journal of Clinical Psychology, 37*(2), 284–290.
- Collaborative for Academic, Social, and Emotional Learning (CASEL). (2003). *Safe and sound: An educational leader's guide to evidence-based social and emotional learning (SEL) programs*. Chicago: Author.

- Collaborative for Academic, Social, and Emotional Learning (CASEL). (2012). *2013 CASEL guide: Effective social and emotional learning programs—Preschool and elementary school edition*. Chicago: Author.
- Conley, C. S., Durlak, J. A., & Dickson, D. A. (2013). An evaluative review of outcome research on universal mental health promotion and prevention programs for higher education students. *Journal of American College Health, 61*(5), 286–301.
- Conley, C. S., Durlak, J. A., & Kirsch, A. C. (in press). A meta-analysis of universal mental health prevention programs for higher education students. *Prevention Science*.
- Deckro, G. R., Ballinger, K. M., Hoyt, M., Wilcher, M., Dusek, J., Myers, P., et al. (2002). The evaluation of a mind/body intervention to reduce psychological distress and perceived stress in college students. *Journal of American College Health, 50*(6), 281–287.
- Durlak, J. A. (1997). *Successful prevention programs for children and adolescents*. New York: Plenum Press.
- Durlak, J. A., Schellinger, K. B., Weissberg, R. P., Dymnicki, A. B., & Taylor, R. D. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*(1), 405–432.
- Easwaran, E. (1978). *Meditation: Commonsense directions for an uncommon life*. Petaluma, CA: Nilgiri Press.
- Easwaran, E. (1991). *Meditation: A simple eight-point program for translating spiritual ideals into daily life* (2nd ed.). Tomales, CA: Nilgiri Press.
- Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., et al. (1997). In J. O'Neil, J. Houtz, J. A. Jones, & K. Peck (Eds.), *Promoting social and emotional learning: Guidelines for educators*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Ellis, A. (2001). *Overcoming destructive beliefs, feelings, and behaviors: New directions for rational emotive behavior therapy*. Amherst, NY: Prometheus Books.
- Eppley, K. R., Abrams, A. I., & Shear, J. (1989). Differential effects of relaxation techniques on trait anxiety: A meta-analysis. *Journal of Clinical Psychology, 45*(6), 957–974.
- Epstein, E. M., Sloan, D. M., & Marx, B. P. (2005). Getting to the heart of the matter: Written disclosure, gender, and heart rate. *Psychosomatic Medicine, 67*, 413–419.
- Evans, N. J., Forney, D. S., Guido, F. M., Patton, L. D., & Renn, K. A. (2009). *Student development in college theory, research, and practice*. San Francisco: Wiley.
- Fulton, M. A. (1990). *The effects of relaxation training and meditation on stress, anxiety, and subjective experience in college students*. Unpublished doctoral dissertation, Lehigh University, Bethlehem, PA. Retrieved from ProQuest Dissertations and Theses (www.proquest.com).
- Gerdes, H., & Mallinckrodt, B. (1994). Emotional, social, and academic adjustment of college students: A longitudinal study of retention. *Journal of Counseling and Development, 72*(3), 281–288.
- Gloria, A., & Ho, T. (2003). Environmental, social, and psychological experiences of Asian American undergraduates: Examining issues of academic persistence. *Journal of Counseling and Development, 81*, 93–105.
- Grassi, A., Preziosa, A., Villani, D., & Riva, G. (2007). A relaxing journey: The use of mobile phones for well-being improvement. *Annual Review of CyberTherapy and Telemedicine, 5*, 123–131.
- Greenberg, M. T., Domitrovich, C., & Bumbarger, B. (2001). The prevention of mental disorders in school-aged children: Current state of the field. *Prevention and Treatment, 4*(1), 1–62.
- Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., et al. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist, 58*(6/7), 466–474.
- Gresham, F. M. (1995). Best practices in social skills training. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (Vol. 3, pp. 1021–1030). Washington, DC: National Association of School Psychologists.
- Heaman, D. (1995). The quieting response (QR): A modality for reduction in psychophysiologic stress in nursing students. *Journal of Nursing Education, 34*(1), 5–10.
- Hefner, J. L., & Eisenberg, D. (2009). Social support and mental health among college students. *American Journal of Orthopsychiatry, 79*(4), 491–499.
- Hoffmann Gurka, A. C. (2005). *Mindfulness meditation for college students: A study of its utility and promotion of its practice post treatment*. Unpublished doctoral dissertation, Marquette University, Milwaukee, WI. Retrieved from ProQuest Dissertations and Theses (www.proquest.com).
- Howard, D. E., Schiraldi, G., Pineda, A., & Campanella, R. (2006). Stress and mental health among college students: Overview and promising prevention intervention. In M. V. Landow (Ed.),

- Stress and mental health of college students* (pp. 91–123). New York: Nova Science.
- Jones, L. V. (2004). Enhancing psychosocial competence among black women in college. *Social Work, 49*(1), 75–84.
- Jordan, P. J., & Ashkanasy, N. M. (2006). Emotional intelligence, emotional self-awareness, and team effectiveness. In V. U. Druskat, F. Sala, & G. Mount (Eds.), *Linking emotional intelligence and performance at work* (pp. 145–163). Mahwah, NJ: Erlbaum.
- Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General Hospital Psychiatry General Hospital Psychiatry, 4*(1), 33–47.
- Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. New York: Delacorte Press.
- Kanji, N., White, A., & Ernst, E. (2006). Autogenic training to reduce anxiety in nursing students: Randomized controlled trial. *Journal of Advanced Nursing, 53*, 729–735.
- Kindlon, D. J. (1983). Comparison of use of meditation and rest in treatment of test anxiety. *Psychological Reports, 53*(3), 931–938.
- Leggett, D. K. (2010). *Effectiveness of a brief stress reduction intervention for nursing students in reducing physiological stress indicators and improving well-being and mental health*. Unpublished doctoral dissertation, University of Utah, Salt Lake City. Retrieved from ProQuest Dissertations and Theses (www.proquest.com).
- Lopes, P. N., Salovey, P., Coté, S., & Beers, M. (2005). Emotion regulation abilities and the quality of social interaction. *Emotion, 5*(1), 113–118.
- Lösel, F., & Beelmann, A. (2003). Effects of child skills training in preventing antisocial behavior: A systematic review of randomized evaluations. *Annals of the American Academy of Political and Social Science, 587*(1), 84–109.
- Lynch, S., Gander, M., Kohls, N., Kudielka, B., & Walach, H. (2011). Mindfulness-based coping with university life: A non-randomized wait-list controlled pilot evaluation. *Stress and Health, 27*, 365–375.
- Lyons, M. D., & Lufkin, B. (1967). Evaluation of tension control courses for college women. *Research Quarterly of the American Association for Health, Physical Education, and Recreation, 38*(4), 663–670.
- MacLeod, A. K., Coates, E., & Hetherington, J. (2008). Increasing well-being through teaching goal-setting and planning skills: Results of a brief intervention. *Journal of Happiness Studies, 9*, 185–196.
- Markman, H., Stanley, S., & Blumberg, S. L. (2001). *Fighting for your marriage: Positive steps for preventing divorce and preserving a lasting love*. San Francisco: Jossey-Bass.
- Mattanah, J. F., Ayers, J. F., Brand, B. L., Brooks, L. J., Quimby, J. L., & McNary, S. W. (2010). A social support intervention to ease the college transition: Exploring main effects and moderators. *Journal of College Student Development, 51*(1), 93–108.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry, 15*(3), 197–215.
- McDonald, T. W., Pritchard, M. E., & Landrum, R. E. (2006). Facilitating preventative mental health interventions for college students: Institutional and individual strategies. In M. V. Landow (Ed.), *Stress and mental health of college students* (pp. 225–241). New York: Nova Science.
- Meichenbaum, D. (1985). *Stress inoculation training*. New York: Pergamon Press.
- Moss, S. B. (2003). *The effects of cognitive behavior therapy, meditation, and yoga on self-ratings of stress and psychological functioning in college students*. Unpublished doctoral dissertation, University of Southern Mississippi, Hattiesburg, MS. Retrieved from ProQuest Dissertations and Theses (www.proquest.com).
- Oman, D., Shapiro, S. L., Thoresen, C. E., Plante, T. G., & Flinders, T. (2008). Meditation lowers stress and supports forgiveness among college students: A randomized controlled trial. *Journal of American College Health, 56*(5), 569–578.
- Palmer, A., & Roger, S. (2009). Mindfulness, stress, and coping among university students. *Canadian Journal of Counseling, 43*(3), 198–212.
- Parker, J. D. A., Duffy, M. J., Wood, L. M., Bond, B. J., & Hogan, M. J. (2005). Academic achievement and emotional intelligence: Predicting the successful transition from high school to university. *Journal of the First-Year Experience, 17*(1), 67–78.
- Pritchard, M. E., & Wilson, G. S. (2003). Using emotional and social factors to predict student success. *Journal of College Student Development, 44*(1), 18–28.
- Ramos-Sanchez, L., & Nichols, L. (2007). Self-efficacy of first-generation and non-first-generation college students: The relationship with academic performance and college adjustment. *Journal of College Counseling, 10*(1), 6–18.
- Ratanasiripong, P., Ratanasiripong, N., & Kathalae, D. (2012). Biofeedback intervention for stress and anxiety among nursing students: A randomized controlled trial. *ISRN Nursing, 2012*, Article 827972.

- Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes?: A meta-analysis. *Psychological Bulletin*, *130*(2), 261–288.
- Rosenzweig, S., Reibel, D. K., Greeson, J. M., Brainard, G. C., & Hojat, M. (2003). Mindfulness-based stress reduction lowers psychological distress in medical students. *Teaching and Learning in Medicine*, *15*(2), 88–92.
- Seal, C. R., Naumann, S. E., Scott, A. N., & Royce-Davies, J. (2010). Social emotional development: A new model of student learning in higher education. *Research in Higher Education Journal*, *10*, 1–13.
- Sears, S. R., & Kraus, S. (2009). I think therefore I am: Cognitive distortions and coping style as mediators for the effects of mindfulness meditation on anxiety, positive and negative affect, and hope. *Journal of Clinical Psychology*, *65*(6), 561–573.
- Shapiro, S. L., Brown, K. W., & Biegel, G. M. (2007). Teaching self-care to caregivers: Effects of mindfulness-based stress reduction on the mental health of therapists in training. *Training and Education in Professional Psychology*, *1*(2), 105–115.
- Shapiro, S. L., Oman, D., Thoresen, C. E., Plante, T. G., & Flinders, T. (2008). Cultivating mindfulness: Effects on well-being. *Journal of Clinical Psychology*, *64*(7), 840–862.
- Shapiro, S. L., Schwartz, G. E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine*, *21*, 581–599.
- Smith, J. C. (1975). Meditation as psychotherapy: A review of the literature. *Psychological Bulletin*, *82*(4), 558–564.
- Stallman, H. M. (2010). Psychological distress in university students: A comparison with general population data. *Australian Psychologist*, *45*(4), 249–257.
- Stewart-Brown, S., Evans, J., Patterson, J., Petersib, S., Doll, H., Balding, J., et al. (2000). The health of students in institutes of higher education: An important and neglected public health problem? *Journal of Public Health Medicine*, *22*(4), 492–499.
- Tao, S., Dong, Q., Pratt, M. W., Hunsberger, B., & Pancer, S. M. (2000). Social support: Relations to coping and adjustment during the transition to university in the People's Republic of China. *Journal of Adolescent Research*, *15*(1), 123–144.
- Turner, J. T. (1991). *The effect of a biofeedback and stress management course on college student anxiety and academic performance*. Unpublished doctoral dissertation, University of Northern Colorado, Greeley.
- Waldo, M. (1982, August). *Relationship skills workshops in university residence halls: A preventive intervention*. Paper presented at the annual convention of the American Psychological Association, Washington, DC.
- Walker, R., & Frazier, A. (1993). The effect of a stress management educational program on the knowledge, attitude, behavior, and stress level of college students. *Wellness Perspectives*, *10*(1), 52–60.
- Winterdyk, J., Ray, H., Lafave, L., Flessati, S., Huston, M., Danelesko, E., et al. (2008). The evaluation of four mind/body intervention strategies to reduce perceived stress among college students. *College Quarterly*, *11*(1), 1–10.
- Winzelberg, A. J., & Luskin, F. M. (1999). The effect of a meditation training in stress levels in secondary school teachers. *Stress Medicine*, *15*(2), 69–77.
- Wolaver, A. M. (2002). Effects of heavy drinking in college on study effort, grade point average, and major choice. *Contemporary Economic Policy*, *20*(4), 415–428.
- Yager, Z., & O'Dea, J. A. (2008). Prevention programs for body image and eating disorders on university campuses: A review of large, controlled interventions. *Health Promotion International*, *23*(2), 173–189.
- Zins, J. E., Bloodworth, M. R., Weissberg, R. P., & Walberg, H. J. (2004). The scientific base linking social and emotional learning to school success. In J. E. Zins, R. P. Weissberg, M. C. Wang, & H. J. Walberg (Eds.), *Building academic success on social and emotional learning: What does the research say* (pp. 3–39). New York: Teachers College Press.
- Zins, J. E., & Elias, M. J. (2006). Social and emotional learning. In G. G. Bear, K. M. Minke, & National Association of School Psychologists (Eds.), *Children's needs III: Development, prevention, and intervention* (pp. 1–14). Bethesda, MD: National Association of School Psychologists.
- Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.
- Zuroff, D. C., & Schwarz, J. C. (1978). Effects of transcendental meditation and muscle relaxation on trait anxiety, maladjustment, locus of control, and drug use. *Journal of Consulting and Clinical Psychology*, *46*, 264–271.