



Self-Care Practice in Social Work Education: A Systematic Review of Interventions

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ABSTRACT

Social work is a demanding profession as practitioners routinely face difficult situations that affect their well-being. The National Association of Social Workers strongly supports self-care practice as an approved mechanism to offset these challenges, yet practitioners report not learning techniques necessary to perform self-care. In this study, a systematic review compliant with Preferred Reporting Items for Systematic Reviews and Meta-Analyses standards was conducted to identify evidence-based interventions used to improve student self-care practice in social work education. In the four studies meeting inclusion criteria, mindfulness practice was the only empirically evaluated self-care strategy reported—and with mixed results. Mindfulness activities enable social workers to sustain their well-being and is critical to modeling and providing effective service delivery to clients. Areas for further research are indicated.

ARTICLE HISTORY

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Although it is fast becoming a buzzword in academic and professional circles, self-care is not easily implemented or evaluated. Broadly, self-care is purposeful action taken to contribute to wellness and stress reduction (Bloomquist, Wood, Friedmeyer-Trainor, & Kim, 2015). The value, and possibly the challenge, in its implementation and evaluation is that self-care is individualized and unique to each individual. What works for one may not work for another. For example, running may be a very effective technique to minimize stress for one person, but another may receive benefit from meditation or reading.

Realizing the importance of self-care, social work educators may wonder if others are teaching it and with what results. On the one hand, self-care is commonly suggested for addressing the negative effects of working with traumatized populations and in high-stress environments (Cox & Steiner, 2013; Newell & MacNeil, 2010; Salloum, Kondrat, Johnco, & Olson, 2015). On the other hand, few studies have empirically examined its benefits (Salloum et al., 2015). Given the stressful nature of professional social work (Boyas, Wind, & Kang, 2012; Grant, Kinman, & Baker, 2015; McGarrigle & Walsh, 2011), continued interest in the topic of self-care is expected for the foreseeable future.

Self-care and social work

In the past several years, many have written on the topic of self-care and its importance to social work (Agllias, 2012; Grise-Owens, Miller, & Eaves, 2016; Harr, Brice, Riley, & Moore, 2014; Lee & Miller, 2013; Raheim & Lu, 2014; Salloum et al., 2015; Wilson, 2016). To appreciate the need for self-care, one must begin with an examination of the profession and its distinct demands. Social work is a profession of helpers involved in complex caseloads, challenging client situations, and high volumes of work (Hansung & Stoner, 2008). These positions are often emotionally demanding. Social workers frequently engage with clients who have experienced trauma and are in crisis (Newell & MacNeil,

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2010). Further, their positions often entail awkward and difficult human interactions. Social workers must gain a thorough knowledge and understanding of their clients' situations to effectively design appropriate services (Figley, 2002), which may invoke not only feelings of discomfort and unrest but also result in secondary traumatic stress and even professional burnout and employee turnover (Conrad & Kellar-Guenther, 2006; Dagan, Ben-Porat, & Itzhaky, 2016; Middleton & Potter, 2015; Wagaman, Geiger, Shockley, & Segal, 2015).

Social workers experience threats to their emotional well-being and cannot simply shut off what they have seen, heard, and felt. In the end, social workers must somehow process the human tragedies that they must engage with and somehow emerge emotionally and mentally healthy enough to serve their clients effectively. Social workers' stress not only affects the well-being of those who are suffering but can also reduce the efficacy of service delivery (Collings & Murray, 1996; Grise-Owens et al., 2016; National Association of Social Workers [NASW], 2008; Smullens, 2015).

Self-care and social work education

Preparing future social workers for their professional careers requires education and training in which students often are pushed out of their comfort zones. Students get a taste of what they may experience through social work's signature pedagogy—social work field education. However, students sometimes find there is a personal cost to this education. Specifically, the content may force students to uncover and reexamine negative life experiences (Collins, 1995). Almost 25 years ago Rompf, Royse, & Dhooper (1993) found that social work field education produced student anxiety. Undertaking a social work program itself can be a stressful experience (Collins, Coffey, & Morris, 2010; Dziegielewski, Turnage, & Roest-Marti, 2004; Litvack, Mishna, & Bogo, 2010; Moran & Hughes, 2006; Munson, 1984; Tobin & Carson, 1994), and educators are aware of this challenge. In a mixed-methods study of social work educators, Grant et al. (2015) found that the majority of the social work educators regarded stress as a consequential problem for their students.

Appreciating the unsettling difficulties that social workers face as students and can expect to see as professionals, the NASW (2008) has taken a strong position sanctioning professional self-care as an approved mechanism to improve and restore the social worker's well-being and supports professional self-care at various levels for practitioners as well as students. The policy specifically recommends, "the training of social work students about self-care in their field experience and the modeling of these behaviors by field instructors" (NASW, 2008, p. 270). The Council of Social Work Education (CSWE, 2015) does not state an explicit competency or practice behavior on self-care in its *Educational Policy and Accreditation Standards*. However, some programs may interpret Competency 1 (Demonstrate Ethical and Professional Behavior) as being relevant to self-care plans in the use of reflection and self-regulation to guide professional judgment and behavior.

As educators, are we doing enough? Bloomquist et al. (2015) surveyed a convenience sample of 786 alumni from CSWE-accredited MSW programs and discovered that social work practitioners did not report engaging in consistent self-care practice. When asked about their preparation for self-care practice as graduate students, respondents stated that their MSW programs valued self-care but did not effectively teach them how to engage in self-care practice. If social work practitioners do not feel they have been adequately prepared as students to implement techniques to effectively practice self-care, is there a gap between the classroom and the workforce?

Purpose of study

The objective of this study was to examine currently used interventions reported in the literature for improving the self-care of students in social work education. It is believed that appropriate training for competent professional practice will necessitate the use and modeling of self-care mechanisms that should be put in place in accredited social work programs. How can we expect students to become expert practitioners without adequately preparing them with the knowledge to take care of themselves?

This study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses to conduct a systematic review on self-care interventions for social work students in the United States. These guidelines for reporting systematic reviews are becoming the gold standard of reviews. The guidelines contain 27 criteria across seven areas (i.e., title, abstract, introduction, methods, results, discussion, funding) and follow a four-phase flow diagram (see [Figure 1](#); Moher, Liberati, Tetzlaff, Altman, & the PRISMA Group, 2009). The aims of this study were to (a) identify and characterize the published self-care interventions for social work students in the United States, (b) analyze and synthesize the findings and common themes from such interventions. and (c) offer recommendations for future consideration.

Methods

Search and eligibility criteria

A systematic literature review was conducted to search for all studies in the past 10 years that reported the results of self-care interventions for social work students in the United States. The following inclusion criteria were established: (a) must be published in English, (b) must be published

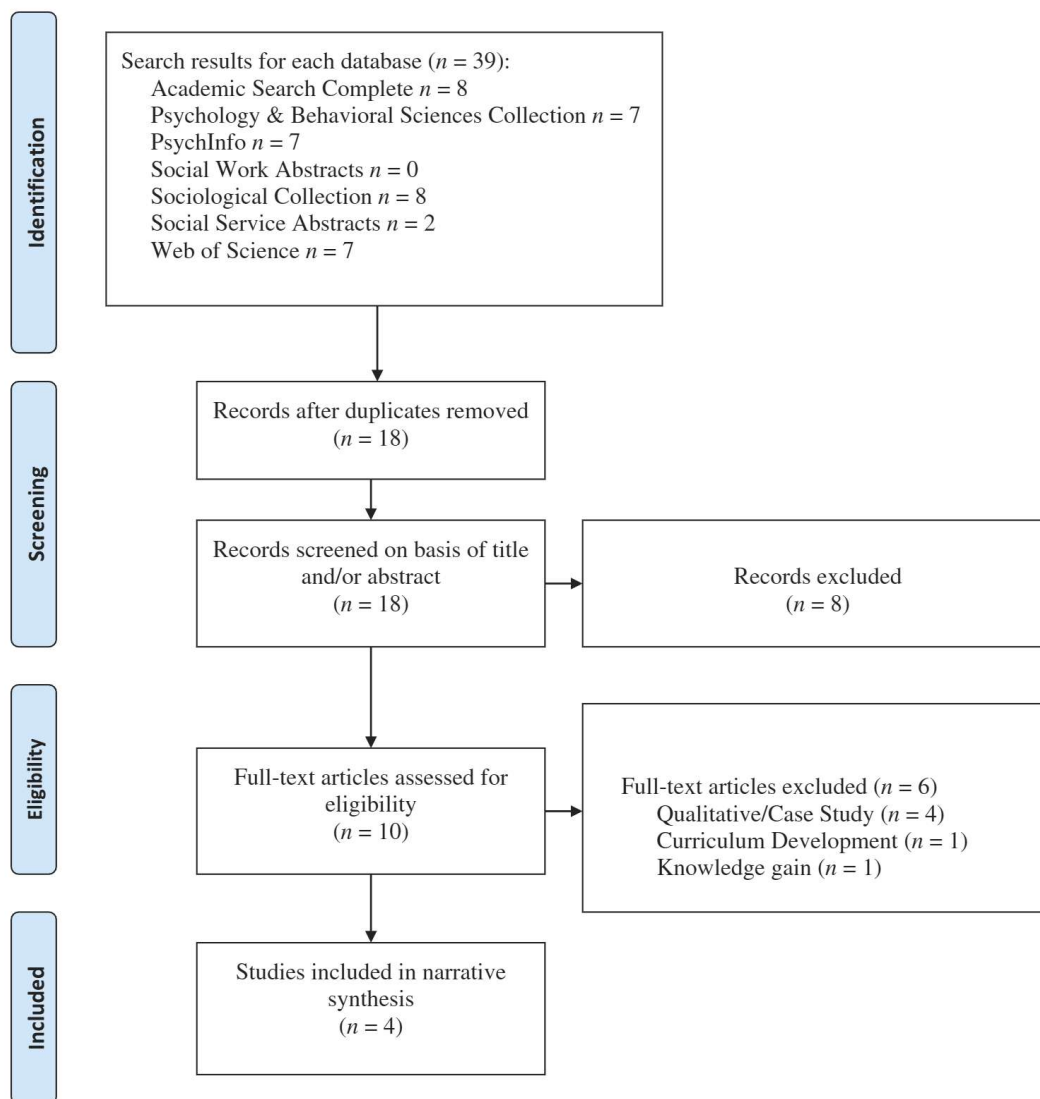


Figure 1. PRISMA flow diagram.

in a peer-reviewed journal, and (c) must have been published between 2006 and November 2016. A 10-year time frame was chosen to ensure that the latest and most relevant interventions were included. However, it is important to note that only two manuscripts were published prior to 2006 using the selected search terms. The following electronic databases were searched: (a) Academic Search Complete, (b) Psychological and Behavioral Sciences Collection, (c) PsycINFO, (d) Social Work Abstracts, (e) Sociological Collection, (f) Social Services Abstracts, and (g) the Web of Science. A methodological process of searching each database was conducted, using three sets of terms (“social work education” AND self-care OR “self-care” AND student OR intern).

Study selection and characteristics

The identified databases were searched, and any articles that met the initial criteria were exported to an Microsoft Excel document. After the duplicates were removed, titles and abstracts were scanned by Griffiths and Murphy to eliminate articles that had an international focus, were qualitative in nature, or indicated topics other than self-care. Both of them agreed on the eliminated articles. Griffiths used MAXQDA (Version No. 12; VERBI, 2016), a software program designed to assist with qualitative data analysis, to extract data from the final selected articles.

The initial search of all relevant databases revealed a total of 39 records. After screening for duplicates, a total of 18 articles met criteria for further review. An examination of the titles and abstracts removed eight articles from consideration because they had an international focus ($n=1$), were qualitative in nature ($n=1$), or involved topics other than self-care ($n=6$). Although it is important to note that self-care practices are integral regardless of location and that it can be assumed that social work students and practitioners are faced with similar stressors globally, it is equally appropriate to acknowledge that the CSWE only accredits programs in the United States. Therefore, when examining social work curricula for U.S.-based students, Griffiths and Murphy concurred that it was appropriate to exclude educational interventions that occurred outside the United States. Further, it is important to note the rationale for excluding qualitative articles in this review. Although qualitative data are important, especially to the field of social work, it is not possible to generalize these to a larger group as a result of the inherently small samples included in qualitative research. The full text of the remaining 10 records were pulled by Griffiths, who examined them in more detail to determine whether eligibility criteria were met. Six of these manuscripts were eliminated because of focusing specifically on curriculum development (Gockel, 2015) or course learning objectives (Raheim & Lu, 2014), no evaluative component, being predominantly qualitative in nature (Gockel & Deng, 2016; Moore, Bledsoe, Perry, & Robinson, 2011; Shannon, Simmelink-McCleary, Im, Becher, & Crook-Lyon, 2014), or only including a review of the literature (Newell & Nelson-Gardell, 2014). In the end, a total of four articles were located that examined objective and quantitatively assessed self-care interventions for social work students in the United States.

Data analysis

After the final selection of manuscripts for inclusion was determined, Griffiths used MAXQDA (VERBI, 2016) to conduct a content analysis by extracting data from each of the included articles. Data were extracted related to sample size, purpose, intervention, measure of improvement, design, and findings.

Results

This section contains a brief overview of each of the final articles that were selected for inclusion in this review. Following the overview, a comparative analysis is presented. Table 1 shows the

Table 1. Sample characteristics.

Author (Year)	Sample Size	Race, Ethnicity	Age	Sex
Bonifas & Napoli, (2014)	N=77	Native American (n=2; 2.3%) Latino (n=5; 6.8%) Caucasian (n=65; 84.1%) Multiracial (n=3; 4.5%) Declined (n=2; 2.3%)	21–25 (n=18; 23.2%) 26–30 (n=23; 30.3%) 31–35 (n=9; 11.6%) 36–40 (n=11; 14.0%) 40 plus (n=16; 20.9%)	Female (n=65; 84.1%) Male (n=12; 15.9%)
Gockel et al., (2013)	N=132	Caucasian: 74% Mixed: 11% Black: 5% Latino: 5% Other: 5%	Range: 21–62 M=30.02 (SD=9.0)	Female: 84.1% Male: 14.4% No Response: 1.5%
Lee & Himmelheber, (2016)	N=56	Caucasian (n=54; 96.4%)	Range: 21–56 M=29	Female: (n=50; 89.3%)
Napoli & Bonifas, (2011)	N=31	Caucasian (85.4%)	Not reported	Female: 85.4%

descriptive characteristics of each of the studies, and Table 2 shows the extracted data related to sample size, purpose, intervention, measure of improvement, design, and findings.

The development of mindfulness: The quality of life curriculum

Bonifas and Napoli (2014) employed a preexperimental design to determine whether participation in a mindfulness-based curriculum would improve students' overall quality of life and decrease students' perceived stress levels. Specifically, they used a one-group pretest-posttest design and collected data over the course of 5 academic years. The intervention was a 16-week graduate-level elective, Quality of Life: Development of Mindfulness, in which students met each week for a period of 3 hours. This curriculum was based on four elements of mindfulness: (a) empathically acknowledging experience, (b) intentionally paying attention, (c) taking action toward change, and (d) decision making. Further, the curriculum included guided breathing meditation, self-reflection, independent learning exercises, group discussions, themed lectures, and homework assignments (i.e., mindfulness journal, critical thinking reading logs, fast fact research presentation; Bonifas & Napoli, 2014).

To assess the outcomes, student overall quality of life and student perceived stress level, Bonifas and Napoli (2014) used the Generic III Version of Ferrans and Powers Quality of Life Index (QLI) and the Perceived Stress Scale (PSS). The QLI examines five areas: (a) family, (b) psychological and spiritual, (c) social and economic, (d) health and functioning, and (e) overall quality of life. Although reliability information was reported on the QLI ($\alpha=.93$), there was no reliability information reported on the PSS (Bonifas & Napoli, 2014).

Over the course of 5 years, 77 students completed the QLI and the PSS (see demographic characteristics in Table 1). Results indicated that students reported a significant increase in their overall quality of life but no statistically significant decrease in their perceived levels of stress. Specifically, mean changes were examined on all five areas of the QLI, revealing significant improvement in the student's life satisfaction in health and functioning ($p<.01$), psychological and spiritual ($p<.01$), social and economic ($p<.001$), and overall quality of life ($p<.001$). However, no significant improvement was found in the area of family. The study also explored differences for students based on their past exposure to mindfulness concepts with mixed results (Bonifas & Napoli, 2014).

Self-care and clinical training

Gockel et al. (2013) conducted a quasi-experimental study to determine whether integrating brief mindfulness training into a clinical interviewing class would affect student outcomes. Data were collected on the first day of class, on the second to last day of class, and 3 months after students had been in the field. Specifically, graduate-level MSW students were enrolled in one of seven clinical interviewing skills sections, two of which introduced mindfulness training, and five

Table 2. Summary of findings for student self-care interventions.

Author (Year)	Sample Size	Purpose	Intervention or Protocol	Relevant Measures of Improvement	Design or Frequency	Finding
Bonifas & Napoli, (2014)	N=77	Increase student quality of life, lower student perceived levels of stress through mindfulness in self-care routines	16-week course, Quality of Life: Development of Mindfulness,	- Generic III Version of the Ferrans and Powers Quality of Life Index - Perceived Stress Scale	Pre-, posttest Pre-experimental design	- Significant improvement in student quality of life - No significant improvement in student perceived levels of stress
Gockel et al., (2013)	N=132	Increase student well-being, mindfulness, and counseling self-efficacy	10 weeks, 15-minute training in 28 class sessions over 10 weeks, modified version of the Mindfulness-Based Stress Reduction curriculum	- State subscale of the State Trait Anxiety Inventory - Reflection-rumination questionnaire - Freiberg Mindfulness Inventory - Mindful Attention Awareness Scale - Neff's Self-Compassion Scale - Interpersonal Reactivity Index	Pre-, posttest Quasi-experimental design (3-month follow-up)	- Significant improvement in counseling self-efficacy - Significant improvement on Freiberg Mindfulness Inventory but not on Mindful Attention Awareness Scale related to mindfulness - No significant improvement in student well-being
Lee & Himmelheber, (2016)	N=56	Increase student mindfulness practice of observation, awareness, and nonjudgmental stance	14-week pedagogical model in social work field practicum or field seminar course	Five Facet Mindfulness Questionnaire	Pre-, posttest Quasi-experimental design (comparison group)	- Significant improvement in three of five domains (observing, nonjudgement, and nonreactive) - No significant improvement in description or acting with awareness. - Experimental group did not significantly increase frequency of engaging in mindfulness practice
Napoli & Bonifas, (2011)	N=31	Enhance student self-care and professional development through mindfulness practice strategies	16-week course, quality of life curriculum	Kentucky Inventory of Mindfulness Scale	Pre-, posttest Pre-experimental Design	- Significant improvement in three of four domains (acting with awareness, observing, accepting without judgement) - No significant improvement in describing domain

sections provided the standard curriculum. The intervention consisted of 10 minutes of mindfulness training followed by 5 minutes of discussion over a 10-week time frame in 28 class sessions. To ensure fidelity, the same individual with the educational and occupational training in mindfulness-based stress reduction conducted the intervention (Gockel et al., 2013).

Given the multiple interests of the study, seven outcomes were assessed: (a) anxiety, (b) neurotic self-attention, (c) mindfulness in daily life, (d) frequency of states of present moment awareness, (e) ability to respond to one's own struggles, (f) empathy, and (g) counseling self-efficacy. The following scales, with their reliabilities, were used to assess these outcomes: (a) state subscale of the State Trait Anxiety Inventory ($\alpha=.91-.93$), (b) Reflection-Rumination questionnaire ($\alpha=.90$), (c) Freiberg Mindfulness Inventory ($\alpha=.89$), (d) Mindful Attention Awareness Scale ($\alpha=.80-.90$), (e) Neff's Self-Compassion Scale ($\alpha=.86$), (f) Interpersonal Reactivity Index ($\alpha=.70-.78$), and (g) Counselor Activity Self-Efficacy Scales ($\alpha=.79-.94$). Reliability analyses were also conducted with the current sample, and results were comparable (Gockel et al., 2013).

A total of 132 students participated in this study, with 28.8% ($n=38$) enrolled in the two sections that included mindfulness and 71.2% ($n=94$) enrolled in the five sections with the standard curriculum. Sample characteristics are displayed in Table 1; however, it is important to note that we only reported overall characteristics and did not mention whether there were any differences between intervention and control groups. Results indicated there was no evidence that the general mindfulness or well-being of the student participants improved. However, students did report that the intervention was beneficial for their clinical practice, and the majority of those in the intervention group began to use the techniques learned in the field. Related to student well-being, between-group differences at posttest were found on the Freiberg Mindfulness Inventory ($p=.034$), but not on the Mindful Attention Awareness Scale. With respect to practice skills, results also indicated a statistically significant improvement in counseling self-efficacy ($p=.005$; Gockel et al., 2013).

Self-care and field education

Lee and Himmelheber (2016) employed a quasi-experimental design to determine whether integrating a mindfulness-based pedagogical model in a social work field seminar course would increase students' mindfulness practice. Specifically, this study had a pretest-posttest design in which students completed the pretest at the beginning of the semester and the posttest at the end of the semester. The intervention was a 14-week mindfulness-based pedagogical model that included the following: (a) an initial lecture on mindfulness, (b) 12 weeks of mindfulness exercises followed by a short debriefing, (c) 2-minute breathing meditations in each class, (d) integration of mindfulness in field experiences discussions, and (e) an invitation to discuss mindfulness in critical reflection journals (Lee & Himmelheber, 2016).

To assess the outcome, mindfulness practice, Lee and Himmelheber used the Five Facet Mindfulness Questionnaire, which contains 39 items and five subscales: (a) observing, (b) describing, (c) nonreacting to the inner experience, (d) nonjudgment of the inner experience, and (e) acting with awareness. Although we note this is a well-known instrument used to assess mindfulness, we did not report any reliability or validity information (Lee & Himmelheber, 2016).

The sample included 56 BSW and MSW social work field seminar students at two different universities. Students were either enrolled in the intervention ($n=27$) or the comparison group ($n=29$); however, we did not disclose how assignment to the two conditions were determined. Sample characteristics are displayed in Table 1; however, it is important to note that we only reported overall characteristics and did not mention whether there were any differences between the intervention and comparison groups. The results indicated that the experimental group displayed a significant increase in mindful practice in the domains of observation ($p=.018$), nonjudgement of the inner experience ($p=.016$), and non-reacting to the inner experience ($p=.002$); however, significant improvement was not made in the areas of describing ($p=.192$) or acting with awareness ($p=.263$). Related to the frequency in which the students engaged in mindfulness practice in their

personal or professional lives, the posttest revealed no significant differences between the comparison and intervention groups (Lee & Himmelheber, 2016).

Creating a mindful classroom: The quality of life curriculum

Napoli and Bonifas (2011) employed a pre-experimental design to determine whether exposure to a mindfulness-based curriculum would improve mindfulness practice. Specifically, they used a one-group pretest-posttest design and collected data from two sections of a course. The intervention was a 16-week graduate elective that focused on the use of formal and informal mindfulness practice strategies based on four elements of mindfulness: (a) empathetically acknowledging, (b) intentionally paying attention, (c) accepting experience without judgment, and (d) enhancing sensory awareness. The intervention included 10 minutes of mindful breathing meditation at the beginning of class and again later toward the end of class. Participants met weekly for a period of 3 hours, with each session focusing on a new aspect of self-care (e.g., nutrition, exercise, etc.). In addition to classroom activities, students were also asked to read journal articles related to the discussed topics as well as critically reflect on them in a critical thinking log, complete weekly journal entries describing their use of mindfulness in a variety of locations (e.g., school, home, work, etc.), complete 1-hour of mindfulness practice twice a week using an audio CD as a guide, complete mindfulness exercises, and participate in a closing ritual at the end of the semester (Napoli & Bonifas, 2011).

To assess the outcome of mindfulness practice, Napoli and Bonifas (2011) used the Kentucky Inventory of Mindfulness Questionnaire, which included four dimensions: (a) observing, (b) describing, (c) acting with awareness, and (d) accepting without judgment. They reported reliability in the acceptable range ($\alpha=.83-.91$) (Napoli & Bonifas, 2011). The final sample included 31 students (see Table 1 for descriptive characteristics). Results indicated that statistically significant gains were made in accepting without judgment ($p=.05$), acting with awareness ($p=.001$), and observing ($p=.001$); however, there was no statistically significant difference in the describing dimension.

Discussion

Synthesis of results

Synthesizing the results of this systematic review, it becomes clear that much more work is still needed. Specifically, the most apparent concern is the lack of relevant empirical research that examines the efficacy of self-care interventions in a CSWE-accredited social work curriculum. In the past 10 years, only four peer-reviewed articles have been published that include quantitative instruments for measuring social work students' self-care practices following a pedagogical intervention either embedded within an existing course or as an elective. Further, the results were mixed. It does appear that the addition of mindfulness training in social work courses has an impact on the use of mindfulness practices (Lee & Himmelheber, 2016; Napoli & Bonifas, 2011), overall quality of life (Bonifas & Napoli, 2014), and counseling self-efficacy (Gockel et al., 2013); however, it does not have an effect on perceived levels of stress (Bonifas & Napoli, 2014). It is critically important to mention that all the studies were focused on the implementation of mindfulness as the intervention being evaluated for student self-care practice; however, there are a number of other self-care programs that have been shown to be effective (Kravits, McAllister-Black, Grant, & Kirk, 2010).

Mindfulness is popular and appears to have an inside track on being perhaps the most widely accepted self-care practice when teaching social work students techniques on how to care for themselves (Crowder & Sears, 2017; Harker, Pidgeon, Klaassen, & King, 2016; Lynn & Mensinga, 2015; Trowbridge & Mische Lawson, 2016). Mindfulness is, in some ways, an easy choice as it is not as strenuous as some forms of self-care such as physical exercise (e.g., jogging, hiking, gardening, etc.). Its ease of implementation makes mindfulness a favorite when attempting to integrate a self-care intervention for social work students. Also, the literature has shown that students have

continued to use these techniques when making the transition into their roles as practitioners (Gockel, Burton, James, & Bryer, 2013; Lee & Himmelheber, 2016; Lynn & Mensinga, 2015; Trowbridge & Mische Lawson, 2016). However, the results of mindfulness-based pedagogy when taught to social work students indicated mixed results.

Although mindfulness is important and needs to be further explored, trying to wedge a self-care intervention into an already crowded social work curriculum has challenges. Further, it should be recognized that a one-size-fits-all approach may not be the best strategy. Self-care practices are considerably broader than mindfulness and what works for some may not work for others. For example, Moore, Bledsoe, Perry, and Robinson (2011) implemented a self-care journal assignment with MSW students, finding that the most commonly reported self-care activities that students found helpful were engaging in activities with their children, exercising, and spending time with family and friends. Similarly, Shannon et al. (2014) reported that students engaged in physical, relational, and cognitive self-care strategies such as running and dancing (physical), sharing feelings with coworkers and friends (relational), and using deliberate distractions like television and listening to music (cognitive).

There were also several limitations of the studies included in this review. Two of the studies did not include a comparison or control group (Bonifas & Napoli, 2014; Napoli & Bonifas, 2011), which limits what can be gleaned from the results. Although it can be determined that there is a significant difference between pre- and posttest, there is no way to determine whether that was a result of the intervention. Similarly, those studies that included a comparison or control group had complex interventions with many different parts (Gockel et al., 2013; Lee & Himmelheber, 2016). With so many different components, it is not possible to determine whether one part of the intervention was most beneficial or whether the intervention in its entirety mattered. These studies also did not report on whether there were any differences between the comparison and intervention groups with respect to demographic characteristics; therefore, it is difficult to make any generalizations based on the data reported. Gockel and colleagues (2013) reported pretest and posttest scores for the intervention and the control groups on the counseling self-efficacy scales but not on any of the other measures. Based on these data, there was a statistically significant difference at pretest on this scale between the intervention and comparison groups, which means that the results should be interpreted with caution. At pretest the control group scored significantly lower than the intervention group, which exhibited similar patterns at posttest.

Biases

Potential bias in the review process

There is always the possibility of some risk in the review process; however, steps were taken to minimize this risk. Although a number of databases were searched, some websites were inevitably overlooked (i.e., What Works Clearinghouse). Additionally, the search terms that were used for this review were relatively narrow, which may have inadvertently eliminated potential manuscripts from review. Although Griffiths and Murphy independently conducted the search using the preidentified search terms and agreed on exclusion criteria, only Griffiths thoroughly reviewed the final manuscripts to extract the data included in this review. Specifically, two exclusion criteria may have introduced bias in the review process: inclusion of only quantitative studies and only interventions in the United States. The inclusion of excluded studies may have added a different perspective that is not presented in this review.

Risk of bias across studies

The possibility of students feeling pressure to produce socially desirable responses must be considered, as was noted in Napoli and Bonifas (2011). Also, educational interventions are dependent on the delivery mechanism and skillset of those disbursing the information. Self-reported data must be interpreted cautiously. Sample size was a concern in two of the four studies (Lee & Himmelheber, 2016; Napoli & Bonifas, 2011), and there was a profound lack of diversity. It was unclear if traditional and nontraditional students participated. Further, cross-sectional designs limit the ability to infer causality. Having students complete self-reported posttests at the end of the semester may

also have affected the findings, as final exams and other contextual factors generally increase student stress and anxiety at that time. Finally, a consistent concern in the included studies was the inability to identify which specific element in the intervention may have contributed to either the positive or negative outcome in the findings.

An inherent risk of bias across all studies was the lack of diversity, with a majority of participants in each study being Caucasian and female (Bonifas & Napoli, 2014; Gockel et al., 2013; Lee & Himmelheber, 2016; Napoli & Bonifas, 2011). Almost half (Bonifas & Napoli, 2014; Gockel et al., 2013) to 82% of students (Lee & Himmelheber, 2016) had prior exposure to mindfulness techniques, which may have affected the results. In two of the studies, a control or comparison group was not used (Bonifas & Napoli, 2014; Napoli & Bonifas, 2011), and causality cannot be determined with a pretest-posttest design (Bonifas & Napoli, 2014; Gockel et al., 2013; Lee & Himmelheber, 2016; Napoli & Bonifas, 2011). Another potential source of bias was related to the use of measures in some of the included studies. The QLI used to measure life satisfaction in a population of social work students (Bonifas & Napoli, 2014) was normed on a sample of chronically ill individuals. Additionally, the Kentucky Inventory of Mindfulness used by Napoli and Bonifas (2011) was normed with a sample of psychology students and with a sample of people with borderline personality disorder. Last, there are concerns about the applicability of the Five Facet Mindfulness Questionnaire used by Lee and Himmelheber (2016) as it is used to measure general mindfulness and may not be a particularly good fit for the context of social work practice. Other potential sources of bias across studies include the following: (a) Measuring stress with a posttest near the end of the semester may have influenced the validity of students' scores on the PSS because of possible confounding factors that were not considered (i.e., final exams; Bonifas & Napoli, 2014) and (b) lack of follow-up data as a result of attrition (Gockel et al., 2013).

Implications for practice and future research

Considering the results of this review, a few questions come to mind about mindfulness. If students were previously exposed to mindfulness as a self-care practice strategy, will this result in its greater use later in practice? How much mindfulness must be taught in the classroom, and when is the best time to teach it to social work students? Future research should explore if specific self-care techniques work well uniformly, or if they are best applied to specific scenarios. For example, which self-care techniques work when a social worker learns of a child's trauma or when informed that a current client has committed suicide? What if you are a public child welfare worker and encounter significant organizational barriers limiting your ability to practice self-care at your agency (Griffiths & Royse, 2017)? What then should the practitioner do on his or her own? An examination of the problems associated with attempting to practice self-care as a social worker is needed. Most important, what unhealthy habits do social workers develop when not practicing self-care?

Beyond these questions, there must be more evaluation of self-care practice techniques. When studies show that use of self-care practices significantly reduces stress and the negative effects associated with helping others, it is important to understand which intervention models or modules on self-care work best. Is it best to teach a single approach, or should students be exposed to a variety of techniques? Researchers must also seek to better explain any associations found between specific techniques and outcomes through experimental design and random sampling as well as ensure that samples are representative of diverse populations. This will greatly improve the rigor and applicability of the results.

Finally, future studies must consider forms of assessment that do not solely rely on paper-and-pencil measures. For example, supplementing the self-reported data with the biometric analyses of relevant items (e.g., cortisol levels, blood pressure, weight, heart rate) would supply a whole new level of information. Considering the varying educational and psychological stresses associated with being