Efficacy of Guided Versus Self-Induced Learning of Web-Based Self-Compassionate Journaling by College Students

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We conducted 3 studies examining the efficacy of web-based self-compassionate journaling (SCJ). The goal was to compare the effects of guided and self-administered journaling on self-reported follow-up self-compassion scores and participant perceptions of the induction. In Study 1 participants were randomly assigned to an online SCJ exercise, online narrative journaling control group, or attention control (AC) group, with groups completing tasks for 4 weeks. In Study 2 participants self-selected into either online or in-lab conditions to complete a single-time SCJ exercise. Study 3 was a replication of Study 2, with participants being randomly assigned to conditions. There were no differences in self-compassion between groups in Study 1. However, there was a small but significant overall increase in self-compassion among participants from baseline to follow-up. There were self-compassion differences between online and in-lab groups in Study 2 (with a small effect size). However, these differences were not maintained when the covariate of baseline trait self-compassion was removed from analyses. Study 3 failed to replicate significant findings from Study 2 in all but one variable: whether participants completing the induction alone found the task more difficult to complete. In general, SCJ may not be an adequate way to increase self-compassion regardless of whether it is learned online or in a laboratory setting. Furthermore, those who learn SCJ alone online report difficulty in completing the induction.

KEYWORDS: self-compassion, web-based inductions

College is potentially a major, life-altering experience that requires a transition from childhood into young adulthood (Kadison & DiGeronimo, 2004). Traditional college students (young adults) are presented with a newfound freedom and independence. Many may find themselves moving away from home for the first time and living on their own with little parental guidance. College students are faced with many uncertainties and stressors, such as trying to make new friends, financial worries, and possibly supporting families of their own (Pascarella & Terenzini, 2005; Pittman & Richmond, 2008).

Because college students face many novel and drastic changes (and are sometimes alone in doing so), theirs is a population particularly vulnerable to mood- and stress-related problems (Lambert,

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McCarthy, Gilbert, Sebree, & Steinley-Bumgarner, 2006). However, there are many perceived barriers among students seeking help. For example, many students new to college do not know what mental health care resources are available and how much these resources cost. Some also report not having enough time to make and keep appointments for in-person meetings (Marsh, 2012; Yorgason, Linville, & Zitzman, 2008). Web-based inductions designed to foster positive outcomes may be a beneficial avenue for students who are unable to make time for in-person meetings or gatherings on campus that serve a similar purpose.

Web-based interventions designed to improve a variety of health outcomes are becoming more popular (Farrer, Christensen, Griffiths, & Mackinnon, 2011; Haas et al., 2008; Luxton, June, & Kinn, 2011; Richards, Timulak, & Hevey, 2012). Online interventions are efficacious in addressing mental health problems of college students, resulting in significant alleviation in negative mental health symptoms (Haas et al., 2008; Richards et al., 2012). Self-help interventions for college students, when offered online, might have several benefits over in-person interventions for those with milder mood-related problems, with such benefits being easier scheduling, reduced anxiety related to perceived stigma of seeking mental health services, and greater accessibility (Farrer et al., 2011; Luxton et al., 2011; Robinson et al., 2012). Meta-analyses (Richards & Richardson, 2012) have found that online interventions are effective overall in increasing coping abilities and decreasing negative psychological experiences, even when compared with in-person interventions and even among those who experience more severe symptoms (Richards & Viganó, 2013; Wantland, Portillo, Holzemer, Slaugher, & McGhee, 2004).

Self-compassion is a trait that consists of mindfulness, common humanity, and self-kindness. Self-compassion is exercised during events that elicit self-conscious emotions—such as embarrassment and shame—and has been linked to various aspects of health and well-being (MacBeth & Gumley, 2012; Neff 2003a, 2003b; Neff & Dahm, 2014). The term *compassion* is a familiar construct in Western psychology (Neff, 2003a). Generally conceptualized as a feeling we reserve for others, compassion involves being open to, being moved by, and desiring to alleviate the suffering of others (Neff, 2003a). Those who are compassionate toward others generally practice kindness and understanding (rather than engaging in judgmental behavior) in addition to realizing that all people make mistakes (Neff, 2003a). Self-compassion operates on the same principles, taking the compassionate mindset one step further by directing feelings of kindness in an objective and nonjudgmental manner toward oneself in much the same way one would do toward other people (Neff, 2003a, 2003b).

When acknowledging to the self (in much the same way one would assure and comfort others) that one's mistakes and shortcomings are part of the human condition, one gains a sense of common humanity and connectedness with other people rather than feeling isolated in a painful experience (Neff, 2003a). The common humanity aspect of self-compassion is directly connected with compassion for others, meaning that being compassionate toward the self is not the result of being selfish or self-centered or putting oneself above others but instead is the result of the awareness that suffering is a common experience that connects us to all other humans (Neff, 2003a).

The mindfulness component of self-compassion distinguishes it from self-pity, which generally involves exaggerating one's pain (overidentification). Although the mindfulness component of self-compassion entails not exaggerating one's suffering, it also prevents one from downplaying the pain (Neff, 2003a, 2011). When practicing mindfulness in self-compassion, one views one's pain objectively and in a more realistic manner rather than being consumed by it or, alternatively, avoiding it.

Altering state self-compassion is presented as an easy task, with several self-guided exercises provided online (e.g., selfcompassion.org; Neff, 2009). Because of the ease of accessibility of these inductions, web-based self-compassion inductions may be a valuable resource for college students seeking to increase state self-compassion and improve mental health.

Several studies have examined how increasing state self-compassion influences a variety of outcomes. Methods range from a one-time induction to inductions that span days or weeks and have been used with student, community, and clinical populations. Past studies have delivered self-compassion inductions via podcasts or online audio recordings

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(see Gilbert, 2009; Gilbert & Procter, 2006), audio clips in laboratory settings (Diedrich, Grant, Hofmann, Hiller, & Berking, 2014; Kelly, Zuroff, Foa, & Gilbert, 2009), verbal instructions provided by experimenters (Adams & Leary, 2007), and group settings that include therapeutic interventions (Imrie & Troop, 2012; Neff & Germer, 2013). The majority of studies have delivered self-compassion inductions to participants in a guided manner (i.e., verbalized).

Krieger, Martig, van den Brink, and Berger (2016) found that multiweek therapeutic intervention programs, such as Mindfulness-Based Compassionate Living, can significantly increase self-compassion, with parts of the induction being provided in audio format. However, researchers did not compare those who asked for assistance with those who did not. Similar research, such as that of McEwan and Gilbert (2016), has also found that online audio-based self-compassion inductions increase state self-compassion. None of these studies have compared outcomes of those who received some sort of guidance (e.g., audio, in-person) with those who received no guidance and who instead guided themselves through the self-compassion exercises by simply reading the instructions provided.

It is also unclear how easy it is for people to engage in these self-compassion exercises without guidance (e.g., audio clips, in-person) or whether there are differences in compliance, outcomes, or experiential responses between those who are self-guided and those who are guided through the inductions by a researcher or other expert. It is important to consider both the efficacy of an intervention (whether it works in a controlled laboratory setting) and its effectiveness (whether it works in a real-world setting outside a laboratory; Rosqvist, Thomas, & Truax, 2011). Recent meta-analyses on the effectiveness of positive psychology interventions in increasing well-being and addressing mood problems (White, Uttl, & Holder, 2019) have shown that, in general, effect sizes tend to be small. The time and energy participants spend on engaging in positive psychology interventions is something researchers should be mindful of when assessing new interventions and avenues of delivery. We must ask whether the benefit of the induction outweighs the burden (which may be eased be creating effective web-based interventions). Although past research has shown that, in general, even brief self-compassion inductions are efficacious, not much is known about their effectiveness when self-administered outside of the laboratory. Inductions may be more efficacious when people are guided through them in a laboratory setting, but we also need to examine whether they are effective in a setting similar to that in which many people seeking self-help techniques may find themselves: practicing interventions available online.

The lack of comparison calls into question the success of self-compassion interventions for people who want to practice self-compassion but who are unable to receive interactive guidance in performing these exercises. For those wanting to learn self-compassion on their own, engaging in self-compassion exercises online would be a likely route to accessing knowledge about self-compassion interventions. It is therefore important to assess how easy it is for such people to self-administer these inductions and the perceptions people have of such exercises. If self-compassion researchers want to evaluate the translational value and ecological validity of self-compassion interventions, it is necessary to evaluate their efficacy in settings that are as close to the real world as possible—that is, those who are guiding themselves through self-compassion exercises.

The current research examines the outcomes of web-based self-compassionate journaling (SCJ) by college students. In Study 1, we examined the differences in follow-up self-compassion between three groups assigned to engage in SCJ, narrative journaling, or simply completing mood measures twice a week over a span of 4 weeks. Study 1 was conducted completely online, with no participant visits to the laboratory. Results indicated that people engaging in SCJ were not significantly different in follow-up self-compassion from those in the two control groups. Because of these findings, we conducted two additional studies to examine potential reasons why SCJ did not result in greater self-compassion in addition to assessing participant perceptions of the self-compassion journaling exercise.

In Study 2, we expanded on Study 1 by examining differences between groups completing the self-compassion journaling task either by learning the task alone online or by being guided by an experimenter in a laboratory setting—something not examined in Study 1. We were also interested in whether com-

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prehension of and compliance with the induction differed depending on route of administration. Finally, we examined participant attitudes toward the inductions.

Study 3 was a replication of Study 2 with an additional component of random assignment to either online or laboratory conditions. Although lack of random assignment in Study 2 may be ecologically valid (i.e., those who want to learn something online rather than attend a physical class will choose to do so), lack of random assignment may be seen as a confounding factor. As a result, we sought to address this issue in Study 3 by randomly assigning participants to either guide themselves through the self-compassion exercise online or to be guided through the self-compassion exercise by a researcher in a laboratory setting.

STUDY 1

In Study 1 we induced self-compassion over a span of 4 weeks with the goal to increase self-reported self-compassion scores in a sample of college students via twice-weekly web-based SCJ. SCJ was compared with two control conditions: a narrative journaling (NJ) control group in which participants also wrote at least two journal entries about a negative event for 4 weeks and an attention control (AC) group in which participants simply completed a mood measure twice weekly for 4 weeks.

Narrative writing has been theorized to enhance and operate on the same mechanisms as mindfulness (Brody & Park, 2004) in that both include normalization and acceptance of negative thoughts and feelings. When having participants recall and write about traumatic events (vs. neutral events) to increase mindfulness, Moore, Brody, and Dierberger (2009) found that narrative writing actually did not increase mindfulness when the baseline was compared with follow-up scores. Perplexingly, people in the control condition, who instead wrote unemotional daily event narratives, actually showed a higher score in the nonjudgmental acceptance aspect of the Kentucky Inventory of Mindfulness Scale (Baer, Smith, & Allen, 2004) when compared with the experimental condition. However, subsequent research found that level of security in attachment could be considered a confounding variable in NJ studies, especially in those comparing traumatic and neutral events (Wilson, 2012). Research seems to be ambivalent about the effectiveness of narrative writing (at least in terms of writing about traumatic events) in increasing self-reported mindfulness. We used narrative journaling as a control condition in Study 1 to observe whether self-compassion journaling, with its added elements of common humanity and self-kindness, could go above and beyond the potential mindfulness-inducing effects of narrative journaling in its effects on self-compassion.

We hypothesized that there would be a significant time × group interaction resulting in an increase in self-compassion from Time 1 (baseline during week 1) to Time 2 (follow-up during week 5) and that the SCJ group would be significantly higher in self-compassion than the two control groups. Although we instructed participants to complete their activity twice a week, we allowed participants to remain in the study as long as they completed it once per week. We controlled for the number of times participants completed their activity in our analyses because past research has suggested that effort put into interventions may act as a moderator in outcomes (Wang et al., 2017).

METHOD

Participants

One hundred eighty-eight participants (147 women, 41 men; *M* age = 22.3 years, *SD* = 7.39) from the psychology participant pool at a Southeastern University in the United States completed the study. Participants signed up for the study on Sona, a participant recruitment and research data collection system, for credit as part of a research-based assignment or for extra credit in their psychology courses. Upon signing up for the studies online, participants were randomly assigned to different links for their condition (SCJ, $N = 66$; NJ, $N = 65$; AC, $N = 57$).

Materials and Procedure

We assessed self-compassion in all participants at baseline and follow-up. We provided a mood measure to the AC group simply as part of an AC design to create a burden similar to the burden of journaling experienced by the self-compassion and narrative journaling groups.

SELF-COMPASSION SCALE.

The original Self-Compassion Scale (Neff, 2003a) consists of 26 items scored on a 5-point Likert scale (1

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= *almost never* to 5 = *almost always*). The 26 items encompass six subscales: self-kindness, self-judgment, mindfulness, overidentification, common humanity, and isolation. Example items include, "I try to be loving toward myself when I'm feeling emotional pain" and "I'm disapproving and judgmental about my own flaws and inadequacies." For Time 1, which was completed before beginning inductions, $\alpha = .80$. For Time 2, which was completed during the fifth week after all inductions were turned in, $\alpha = .94$.

ATTENTION CONTROL GROUP MATERIALS.

Those in the AC group filled out the Positive and Negative Affect Schedule–Extended (PANAS-X) 60-item measure (Watson & Clark, 1994) twice a week for 4 weeks. Only participants in the AC group completed the PANAS-X as a filler task to provide a time burden similar to those of the journaling groups, and therefore positive and negative affect was not examined in the current study.

SCJ GROUP MATERIALS.

The present study used the SCJ technique provided on Neff's website (Neff, 2009). SCJ was used because it is designed to be applied to daily situations and explicitly and coherently outlines how to increase mindfulness, self-kindness, and common humanity (Neff, 2009). Participants were given an example scenario of self-compassion in which a person who is in a hurry is rude to a waitress and later feels ashamed. Participants were asked to think of and journal about their own scenario for which they felt ashamed and then write to themselves about the event practicing mindfulness, self-kindness, and common humanity. Full instructions can be provided upon request.

NJ GROUP MATERIALS.

The NJ induction is similar to the SCJ induction in that participants were asked to think of and write about negative events that elicit feelings of embarrassment, shame, or pain. However, participants in the NJ group were not given further instructions on writing to induce mindfulness, common humanity, and self-kindness. The goal of using NJ as a comparison group was to determine whether simply writing about negative experiences has the same effect on follow-up self-compassion scores as does writing about a negative experience in a self-compassionate manner. Full instructions can be provided upon request.

We originally asked participants to complete their induction at least twice a week to ensure that we got at least one entry of practice in for the study. Although we instructed participants to complete their task at least twice a week, we allowed participants to stay in the study as long as they practiced their induction at least once a week.

RESULTS

A mixed 2 (Time 1, Time 2) × 3 (SCJ, NJ, AC) analysis of covariance (ANCOVA) (with number of times participants completed their task as a covariate) was performed examining changes in self-compassion within groups from Time 1 to Time 2 and differences between groups. We entered the number of times participants engaged in their assigned task as a covariate to control for the possibility that increased practice in their respective tasks on the part of some participants might lead to different outcomes compared with participants who may have been less engaged. There was a significant effect of time, $F(1, 184) = 5.07$, $p = .026$, $\eta_p^2 = .03$. Participants in the study increased in self-compassion from Time 1 ($M = 76.64$, $SE = 1.30$) to Time 2 ($M = 78.97$, $SE = 1.42$) when the number of times participants engaged in their task was controlled for, regardless of group. However, it should be noted that this effect size can be considered between small and medium. There was not a significant effect of condition, $F(2, 184) = 1.26$, $p = .29$, $\eta_p^2 = .01$. There was also not a significant main effect of number of times participants engaged in their respective group tasks $F(1, 184) = 1.45$, $p = .119$, $\eta_p^2 = .01$. There was not a significant interaction between time and number of entries participants made in their respective groups, $F(1, 184) = 3.09$, $p = .081$, $\eta_p^2 = .02$. There was also not a significant interaction between time and condition, $F(1, 184) = 2.03$, $p = .131$, $\eta_p^2 = .02$. See Table 1 for pretest and posttest means and standard deviations for self-compassion scores among all participants in all groups for all three studies. Note that in-text values are for means and standard errors because we used a covariate. Values in Table 1 contain means and standard deviations, which do not reflect the use of covariates.

DISCUSSION

The goal of Study 1 was to examine the efficacy of repeated web-based self-administered SCJ in increasing self-reported self-compassion scores by college students. We hypothesized that those engaging in SCJ would experience a greater increase in self-reported self-compassion scores than participants in the two

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TABLE 1. Pretest and Posttest Self-Compassion Scores Among All Participants, Studies 1–3

	Pretest *M* (*SD*)	Posttest *M* (*SD*)
Study 1 total self-compassion score	76.61 (17.73)	78.88 (19.63)
Self-compassionate journaling	77.12 (18.09)	80.44 (18.72)
Narrative journaling	75.23 (16.95)	74.91 (9.93)
Attention control	77.58 (18.39)	81.60 (19.95)
Study 2 total self-compassion score	80.37 (18.21)	80.79 (19.73)
Online	80.94 (19.45)	80.27 (20.27)
In-lab	79.84 (17.04)	81.27 (19.27)
Recounting	79.05 (18.07)	79.23 (19.66)
Nonrecounting	81. 62 (18.31)	82.27 (19.73)
Online recounting	79.52 (19.60)	78.01 (20.43)
Online nonrecounting	82.19 (19.33)	82.27 (20.01)
In-lab recounting	78.65 (16.74)	80.27 (19.02)
In-lab nonrecounting	81.05 (17.33)	82.27 (19.55)
Study 3 total self-compassion score	79.41 (17.74)	76.07 (20.38)
Online	79.63 (19.32)	75.19 (19.97)
In-lab	79.19 (16.23)	76.95 (20.99)
Recounting	76.85 (16.66)	75.63 (18.22)
Nonrecounting	81.63 (18.52)	76.46 (22.29)
Online recounting	75.75 (17.86)	72.25 (15.10)
Online nonrecounting	83.00 (20.28)	77.74 (23.44)
In-lab recounting	77.95 (15.75)	79.00 (20.73)
In-lab nonrecounting	80.26 (16.92)	75.17 (21.52)

Note: Values in Table 1 represent means and standard deviations of self-compassion across groups within studies at Time 1 and Time 2 without accounting for covariates. In-text values are of means and standard errors (which were reported to reflect the use of covariates).

control groups. However, there were no significant differences in outcomes between groups. However, there was a significant effect of time such that participants seemed to increase in self-compassion from baseline to follow-up regardless of the group into which they were assigned. This could potentially indicate that engaging in some sort of activity may have an effect on self-compassion for some participants.

The lack of interpersonal interaction with an experimenter could have been a major limitation. Previous research on similar web-based programs has shown that choosing to interact with a coach via phone or e-mail increases the likelihood of compliance (Wojtowicz, Day, & McGrath, 2013). Interactions between participants and study personnel for Study 1 were limited to twice-weekly reminders to complete journal entries via e-mail. Study 2 was designed to address the possible issue of lack of experimenter–participant interaction by comparing self-reported self-compassion scores and participant perceptions of and compliance with the induction.

STUDY 2

To address the possibility that participants may have had difficulty understanding the directions of the self-compassion induction when reading instructions online by themselves in Study 1, we compared those who self-administered SCJ online with those who were verbally guided through the induction in a laboratory setting in Study 2. The design changed from Study 1 to Study 2 such that participants had only a single induction rather than a multiweek induction because a main goal of Study 2 was to examine the differences between method of delivery of the induction. We hypothesized that there would be a significant main effect of method of administration of the journaling induction such that those who were guided through the induction verbally by the experimenter would exhibit higher reported self-compassion scores than those who were self-induced through the exercise online by simply reading the instructions provided with the self-compassion induction.

We also sought to determine whether comprehension and compliance with the exercise would increase as a result of a test-enhanced learning effect if participants were asked to recall the instructions. The test-enhanced learning literature hypothesizes that asking people to recall recently learned information (i.e., testing them) reinforces learning, memory, and understanding of material (Roediger & Karpicke, 2006). We hypothesized that asking participants to recall instructions would make the instructions more salient. Having the induction explained by an experimenter may make it easier to understand, and having to recount induction instructions should facilitate test-enhanced learning. Therefore, we hypothesized

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that there would be a significant recounting group × induction method interaction when controlling for baseline self-compassion scores. Those guided through the induction and who also recounted the instructions should experience the highest levels of postinduction self-compassion.

We also coded journal entries to gauge compliance with the induction. We proposed that those guided through the induction and those who recounted instructions would show greater compliance than those completing the induction alone and who did not recount instructions as evidenced by journal entries. Finally, we sought to examine participant perceptions of the induction itself by asking yes/no questions regarding the ease of completing and understanding of the induction as well as likelihood of future use. We hypothesized that guided participants and participants who recounted information would show more positive perceptions toward SCJ than those completing the induction alone online and who did not recount instructions.

METHOD

Participants

Participants were 366 students (269 women, 90 men, 7 who chose not to answer questions about gender; *M* age = 20.03 years, *SD* = 4.55) from the psychology participant pools of two universities located in the Southeast and Midwest regions of the United States. There were 175 participants in the self-induced condition (recounting = 82, nonrecounting = 93) and 191 participants in the guided condition (recounting = 96, nonrecounting = 95). Participants signed up for the study on Sona at both universities.

Materials

We used the same self-compassion measure and induction as in Study 1. The internal consistency score for total self-compassion at both Time 1 and Time 2 was .93.

Procedure

We conducted a quasiexperimental study in which participants self-selected into either online or in-lab conditions. We allowed participants to self-select into either condition because participants who choose online studies over in-lab studies may also be more likely to prefer online self-compassion interventions rather than learning about such interventions in person. Indeed, it is suggested that familiarity with use of computers and the Internet may increase the likelihood of people selecting web-based mental health resources (Wantland et al., 2004). The aspect of self-selection thus has greater external validity.

Participants in all conditions first completed the self-compassion questionnaire, followed by reading the instructions for the SCJ exercise. Participants in the guided condition read the instructions on a computer screen along with an experimenter who read the instructions aloud to the participant. Guided participants were then asked by the experimenter whether they had any questions or needed clarification about any component of the exercise. Participants in the online condition read the SCJ instructions online and were not able to speak to anyone face to face or ask questions about the exercise. Next, all participants either recounted the instructions for the induction or simply completed the induction. Instructions for the recounting condition stated, "In your own words, describe what the goal for the current task is." Participants completed the recounting condition by entering what they remembered about the instructions for the self-compassion exercise in a textbox under the instructions for recounting. Participants then wrote about their negative event while being asked to express mindfulness, self-kindness, and common humanity.

After the induction, all participants once again completed the self-compassion measure. They were then asked yes/no questions about their experience with and perception of the induction. Questions were: "Was the induction you completed today 'hard to follow'? That is, do you think it was difficult to understand?" "Do you think the journaling induction was difficult to complete?" "Would you use this journaling induction in the future?" and "Do you think this journaling induction is helpful?"

RESULTS

The online and in-lab groups were not significantly different from one another at baseline in self-compassion, $t(364) = .58$, $p = .565$. Despite no significant differences, we still controlled for baseline differences in self-compassion in a 2 (self-induced online vs. guided by experimenter) × 2 (recounting vs. nonrecounting) ANCOVA with baseline self-compassion as a covariate. We analyzed baseline self-compassion as a covariate rather than as part of a repeated-measures design because not a lot of time passed from baseline to follow-up assessment,

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and we were controlling for individual differences (via baseline scores) to assess the true effects of condition rather than examine changes in scores. Looking at changes in self-compassion would not be feasible with such a short time period between two time points. When we controlled for baseline levels of self-compassion, there was a significant main effect of method of administration on follow-up self-compassion, $F(1, 361) = 5.16$, $p = .024$, $\eta_p^2 = .01$. Those guided through the induction reported higher levels of self-compassion after the induction ($M = 81.78$, $SE = .67$) than those who completed the exercise online with no guidance from an experimenter ($M = 79.67$, $SE = .64$). There was not a significant main effect of recounting the instructions on follow-up self-compassion, $F(1, 361) = .53$, $p = .469$, $\eta_p^2 = .00$. The recounting group ($M = 80.38$, $SE = .67$) was not significantly different from the non-recounting group ($M = 81.06$, $SE = .65$). There was also not a significant interaction between method of administration of the self-compassion induction and whether or not participants recounted instructions, $F(1, 361) = 1.16$, $p = .282$, $\eta_p^2 = .00$. See Table 1 for pretest and posttest means and standard deviations for self-compassion scores among all participants. Note that in-text values are for means and standard errors because we used a covariate. Values in Table 1 contain means and standard deviations (which do not reflect the use of covariates).

When the baseline self-compassion scores were removed as a covariate, there was no significant effect of method of administration on follow-up self-compassion, $F(1, 362) = 0.300$, $p = .584$, $\eta_p^2 = .00$. There was no significant main effect of recall condition, $F(1, 362) = 2.29$, $p = .131$, $\eta_p^2 = .01$. There was also no significant interaction effect, $F(1, 362) = 0.300$, $p = .586$, $\eta_p^2 = .00$ (see Table 1).

Comprehension by Those Asked to Recount Instructions of the Induction

We conducted chi-square analyses to determine whether experimenter-guided and self-induced groups differed in the frequency with which they mentioned each aspect of self-compassion (mindfulness, self-kindness, common humanity) among those asked to recount instructions. For each participant on each component, we entered "yes" if they mentioned the component and "no" if they did not.

Of the 178 people asked to recount instructions, roughly one third of participants did not say anything about the three components of self-compassion. Less than 20% of participants mentioned all three aspects of self-compassion when recounting the instructions of the induction. Those guided through the indication were significantly more likely (compared with those who learned the induction alone) to recount the aspects of self-kindness and common humanity (Table 2).

Compliance

We coded journal entries for all participants to determine whether participants were, as per the in-

TABLE 2. Participant Comprehension of Induction Instructions (Recounting Condition), Studies 2 and 3

	Study 2 (N = 178)			Study 3 (N = 40)		
Variable	χ^2	EG (N = 96)	SI (N = 82)	χ^2	EG (N = 20)	SI (N = 20)
Recalled no aspects of the induction	0.81	29	30	0.10	3	2
Recalled all aspects of the induction	2.36	20	10	0.54	6	7
Mentioned mindfulness aspect in recall	0.01	59	51	0.40	11	9
Mentioned self-kindness aspect in recall	6.45**	46	24	0.10	8	9
Mentioned common humanity aspect in recall	4.69*	24	10	0.42	9	7

Note. Data indicate rates of comprehension for participants in the group asked to recount the instructions of the induction. EG = experimenter-guided; SI = self-induced.
*$p < .05$. **$p < .01$.

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structions provided, exercising the components of self-compassion (i.e., being mindful of their painful situation without exaggerating or downplaying their pain, saying words of kindness to themselves, and expressing common humanity). Entries were coded as binary: following versus not following directions.

Chi-square analyses indicated that participants guided through the induction were significantly more likely to follow directions in exhibiting all aspects of self-compassion in their entries. There were no significant differences in compliance between the recounting and nonrecounting groups (Tables 3 and 4).

Participant Perceptions of Induction

Chi-square tests were conducted to examine differences between groups (self-induced vs. guided and recounting vs. nonrecounting) on yes/no questions asking whether the induction was difficult to understand, whether it was difficult to complete, whether participants would use the induction in the future, and whether it was helpful. Participants guided through the induction were significantly less likely to think the induction was difficult to understand and complete, more likely to indicate they would use the induction again, and more likely to find the induction helpful than those who learned the induction alone. The only significant difference between the recounting and nonrecounting groups was in whether participants thought the induction was difficult to complete. Those in the recounting condition were more likely to agree that the condition was difficult to complete (see Tables 3 and 4).

DISCUSSION

The goal of Study 2 was to compare the efficacy of methods of administration (self-induced vs. experimenter-guided) of an SCJ induction and its potential effects on state levels of self-reported self-compassion scores. We also assessed the effects of recounting the instructions for the self-compassion exercise on self-reported state self-compassion scores and comprehension of the induction. Finally, we assessed compliance via journal entries and participant perceptions of the induction itself. The general implications of Study 2 are that being guided through an SCJ induction may increase self-reported state self-compassion scores more than learning the induction alone. However, method of delivery was no longer a significant contributor to follow-up self-reported state self-compassion scores when the potential confounding effects of trait levels of self-reported self-compassion scores were removed as measured at baseline. This result indicates that individual differences in trait self-compassion potentially influence the process of self-compassion inductions, thereby

TABLE 3. Compliance With and Perceptions of Induction for Experimenter-Guided and Self-Induced Groups, Studies 2 and 3

	Study 2 (N = 366)			Study 3 (N = 86)		
Variable	χ^2	**EG (N = 191)**	**SI (N = 175)**	χ^2	**EG (N = 43)**	**SI (N = 43)**
Compliance						
Showed self-kindness in entries	23.63**	174	125	0.73	37	34
Showed mindfulness in entries	20.51**	184	143	3.07	39	33
Showed common humanity in entries	3.72*	134	106	0.00	33	33
Perceptions of induction						
Was the induction hard to understand?	15.09**	2	18	2.87	1	5
Was the induction difficult to complete?	17.92**	6	28	3.88*	1	6
Would you use this again in the future?	7.90**	139	103	1.12	36	32
Was the induction helpful?	30.48**	180	128	0.39	38	36

Note. EG = experimenter-guided; SI = self-induced.
*$p < .05$. **$p < .01$.

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TABLE 4. Compliance With and Perceptions of Induction for Recounting and Nonrecounting Groups

	Study 2 (N = 366)			Study 3 (N = 86)		
Variable	χ^2	R (n = 178)	NR (n = 188)	χ^2	R (n = 40)	NR (n = 46)
Compliance						
Showed self-kindness in entries	1.43	141	158	1.33	31	40
Showed mindfulness in entries	2.94	154	173	0.08	33	39
Showed common humanity in entries	0.34	114	126	0.13	30	36
Perceptions of induction						
Was the induction hard to understand?	0.34	11	9	2.31	1	5
Was the induction difficult to complete?	3.88*	22	12	0.99	2	5
Would you use this again in the future?	0.34	115	127	0.11	31	37
Was the induction helpful?	0.12	151	157	0.07	34	40

Note. R = recounting; NR = nonrecounting.
*$p < .05$.

influencing state self-compassion outcomes. Furthermore, those guided through the induction by experimenters indicated a more positive opinion of the induction and, in general, showed greater compliance than those who completed the induction alone. When asked to recall instructions, guided participants in Study 2 differed only in recalling instructions related to self-kindness and common humanity, with guided participants being better at recalling such factors. This may indicate that being guided through an induction makes instructions more readily accessible.

A primary limitation of Study 2 is that we did not randomly assign participants to either the self-induced or experimenter-guided groups. However, it should be noted that guided and self-induced groups were not significantly different from one another in baseline self-compassion. To address this assignment limitation, we conducted a third study in which participants were randomly assigned to either an experimenter-guided or a self-induced self-compassionate exercise group.

STUDY 3

The goal of Study 3 was to further examine participant views of the self-compassionate journaling induction itself while addressing the limitations of Study 2 by randomly assigning participants to either online or in-lab conditions.

METHOD

Participants

There were 86 participants who completed Study 3 (M age = 20.38 years, SD = 3.75; 62 women, 24 men) from Southeastern and Midwestern universities. Forty-three participants were randomly assigned to the online self-induced condition (recounting = 20, nonrecounting = 23), and 43 participants were assigned to the experimenter-guided condition (recounting = 20, nonrecounting = 23).

Materials

We used the same self-compassion measure and induction as in Study 2. Internal consistency scores at both Time 1 and Time 2 were .93. We also assessed the same dependent variable (follow-up self-reported self-compassion scores) as in Study 2. We also assessed the same experiential factors present in Study 2.

Procedure

Rather than listing the study as two separate studies, one online and one in-lab (as was done for Study 2), we advertised the study as a single study. All participants were asked to complete baseline measures

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online before their time slot, during which they were scheduled to come to the study site. When they arrived at the study location, we used mild deception for participants randomly assigned to the online condition. Participants randomly assigned to the online condition were told that our computers were not working but that the experimenter would use a smartphone to e-mail the participant the link for the study. Participants in the online condition were then asked to leave and complete the study online on their own elsewhere.

RESULTS

The online and in-lab groups were not significantly different from one another at baseline in self-compassion, $t(1, 84) = .12$, $p = .909$. Despite no significant differences, we still controlled for baseline differences in self-compassion in a 2 (self-induced online vs. guided by experimenter) × 2 (recounting vs. nonrecounting) ANCOVA with baseline self-compassion as a covariate and self-compassion at Time 2 as the dependent variable. When we controlled for baseline levels of self-compassion, there was not a significant main effect of method of delivery (online $M = 75.02$, $SE = 1.92$; in-lab $M = 77.36$, $SE = 1.92$) on follow-up self-compassion, $F(1, 81) = .75$, $p = .390$, $\eta_p^2 = .01$. We also did not find a significant main effect of recounting ($M = 77.97$, $SE = 1.99$) versus not recounting ($M = 74.41$, $SE = 1.86$) the instructions on follow-up self-compassion, $F(1, 81) = 1.70$, $p = .196$, $\eta_p^2 = .02$, nor a significant interaction between method of administration of the self-compassion induction and whether or not participants recounted instructions, $F(1, 81) = .77$, $p = .382$, $\eta_p^2 = .01$. See Table 1 for pretest and posttest means and standard deviations for self-compassion scores among all participants. Note that in-text values are for means and standard errors because we used a covariate. Values in Table 1 contain means and standard deviations, which do not reflect the use of covariates.

When the baseline self-compassion was removed as a covariate, there was no significant effect of method of administration on follow-up self-compassion, $F(1, 82) = 0.22$, $p = .640$, $\eta_p^2 = .00$. There was still no significant main effect of recall condition $F(1, 82) = 0.04$, $p = .852$, $\eta_p^2 = .00$. There was also not a significant interaction effect $F(1, 82) = 1.10$, $p = .299$, $\eta_p^2 = .01$ (see Table 1).

Comprehension by Those Asked to Recount Instructions of the Induction

Chi-square analyses indicated there were no significant differences between experimenter-guided and self-induced participants on any of the recounting factors (see Table 2).

Compliance

Guided and self-induced groups did not show significant differences in frequencies of compliance in any factors. There was also no difference between recounting and nonrecounting groups (see Tables 3 and 4).

Participant Perceptions of Induction

Participants in the online condition were significantly more likely to report that the induction was difficult to complete than those who were guided through the induction in the lab by an experimenter (see Tables 3 and 4).

DISCUSSION

Study 3 was an attempt to replicate Study 2 with the addition of randomly assigning participants to either online or in-lab inductions (as participants chose their own condition in Study 2). There was not a significant overall effect of method of self-compassion administration on self-reported follow-up self-compassion scores. Among those recounting instructions, there were no differences between guided and self-induced groups. Guided participants were no more compliant in exercising mindfulness, self-kindness, and common humanity in their journal entries than those who self-induced the induction. Those who self-induced self-compassion online reported that the induction was difficult to complete compared with guided participants, but there were no other group differences in perception of the induction.

Bayesian Analyses for All Studies

Because of differences in group sizes across our three studies, we also conducted Bayesian analyses of our main variables of interest across our three studies. This is especially useful because readers may have concern about the smaller group sizes of Study 3. Our group sizes for Study 3 were similar to those in

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other studies using self-compassion inductions (e.g., Adams & Leary, 2007, who had 84 participants in three groups; Gilbert & Procter, 2006, who had nine participants; Smeets, Neff, Alberts, & Peters, 2014, who had 52 participants and two groups). However, we acknowledge the potential concern with the sample size of Study 3. Bayesian analyses allow one to obtain evidence for both the null and alternative hypotheses with small sample sizes, whereas typical null hypothesis testing does not provide evidence for the null hypothesis (Jarosz & Wiley, 2014; Lee & Song, 2004).

We used JASP statistical software (JASP, 2016) to conduct Bayesian factorial ANCOVAs for all three studies. When interpreting Bayes factors (BFs) for testing alternative hypotheses, one observes BF_{10}. As BF_{10} increases, evidence for the alternative hypothesis—that the conditions, manipulations, and components of the study would affect self-reported follow-up self-compassion scores—increases (Marsman & Wagenmakers, 2017; Wagenmakers, 2007). BF_{10} scores should be 1–3 in order to provide "weak" or "anecdotal" support for the alternative hypothesis, with scores ideally being greater than 3 to provide "substantial" or "positive" support (Jarosz & Wiley, 2014; Jeffreys, 1961; Raftery, 1995).

BF_{10} scores for all main and interaction effects across all three studies can be seen in Table 5. All BF_{10} scores fell below 1 in Study 1, indicating that there was no strong support for the hypothesis that SCJ would be better than NJ and an AC group at increasing self-reported follow-up self-compassion scores when the number of times participants completed their respective tasks was controlled for. Nor was there strong support for the effect of time and the interaction between induction and time. There was "weak or anecdotal" support (with a score of 1) for the main effect of method of delivery (online versus in-lab) when baseline self-compassion was controlled for in Study 2 but not in Study 3. There was no support for the main effect of recounting instructions, nor for the interaction between method of induction and recounting condition when baseline trait self-compassion was controlled for in Studies 2 and 3.

TABLE 5. Bayesian ANCOVA BF_{10} (Support for Alternative Hypotheses) Scores, Studies 1–3

	BF_{10}
Study 1	
Main effect of condition	0.17
Main effect of time	0.73
Interaction of condition and time	0.08
Study 2	
Main effect of delivery	1.00
Main effect of recounting	0.12
Interaction of delivery and recounting	0.05
Study 3	
Main effect of delivery	0.24
Main effect of recounting	0.23
Interaction of delivery and recounting	0.06

Note. Study 1 main and interaction effects include effects when controlling for number of entries. Main and interaction effects of Studies 2 and 3 are effects after controlling for baseline self-compassion.

GENERAL DISCUSSION

Our original goal for this research was to examine the effects of web-based repeated SCJ in its ability to increase self-reported self-compassion scores among undergraduate students. When we discovered that SCJ was not significantly different from NJ and a second control group in Study 1, we began to examine the journal entries that participants in the self-compassion group wrote. After realizing that many participants were not following instructions, we shifted our focus to the methodological aspects of the delivery of self-compassion inductions to try to understand why the induction did not work. Neff (2009) presented self-compassion inductions as easily self-induced ways to increase self-compassion and address negative outcomes; however, little research has examined the ecological validity of these claims. Perhaps these inductions—or at least SCJ— are not easily self-administered. Furthermore, self-guided techniques may be difficult in general because previous research on web-based self-guided self-compassion research has shown problems such as low compliance and high dropout rates (Albertson, Neff, & Dill-Shackleford, 2015; Toole & Craighead, 2016).

Study 2 was the only study in which we saw an increase in self-compassion as a result of whether the

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induction was administered online or in-person; participants in a laboratory setting experienced a greater increase in self-reported self-compassion scores than those in an online setting. It should be noted that the effect size related to this increase was small and that the increase was not maintained when we removed trait levels of self-compassion (measured at baseline) as a covariate. Also, we did not replicate this finding in Study 3 when randomly assigning participants to complete the study online versus in the lab.

Participants learning the induction in person in Study 2 showed significantly greater compliance and more positive perceptions across all experiential questions compared with those learning the induction alone. The only difference between those who did and did not recount instructions in Study 2 was that those asked to recall instructions found the induction more difficult to complete than those not asked to recount instructions. When examining perceptions and compliance, Study 3 failed to replicate findings from Study 2 in all but one area. Like participants in Study 2, those learning the induction alone also found the induction difficult to complete in Study 3. Overall, this may indicate that trying to learn the induction on one's own simply by reading instructions may be difficult or confusing. Future research should compare the efficacy of audio-guided online inductions (such as podcasts) and in-person guided inductions to minimize the effort participants must put into reading and understanding inductions.

By not randomly assigning participants to conditions in Study 2 and allowing participants to sign up for either an online or in-lab study, we may have garnered a more representative sample of the types of participants who would try to learn self-compassion online on their own (i.e., the same types of people who sign up for online studies may be the types of people who would rather learn inductions online). Study 2 may therefore have been a more ecologically valid approach to how people learn self-compassion inductions in that we allowed participants to choose their own medium (online vs. in a lab). However, it is important to note that the significant difference in follow-up state self-reported self-compassion scores between self- and experimenter-guided groups disappeared once the covariate of baseline trait self-compassion was removed. This may further explain why Study 3 did not replicate the significant findings of Study 2 when examining self-reported self-compassion differences, even when conducting Bayesian analyses to address potential issues of small sample sizes. SCJ may not be an adequate induction to increase self-reported self-compassion scores.

The fact that we did not require a multiweek induction for Studies 2 and 3 (as we did in Study 1) could be another limitation. However, previous studies on self-compassion (e.g., Adams & Leary, 2007) have shown that just a single induction can increase state self-compassion. Although our goal was to examine the effects of repeated inductions in the first study, it is plausible to assume a single induction would at least increase self-reported state self-compassion scores.

We did not measure familiarity with use of computers, but past research has shown that such familiarity may influence whether people seek mental health resources online (Wantland et al., 2004). There may be individual differences in the types of students who choose online studies over in-person studies. It is feasible that individual differences in computer use and familiarity may affect performance and engagement with online studies that require more than answering questionnaire items. Other individual differences, such as personality characteristics, may also explain participation in online studies as well as receptivity to and compliance with self-guided inductions.

Finally, another limitation may be the use of writing exercises for self-compassion inductions in general and use of SCJ specifically. Such exercises may be time- and effort-intensive and may be considered a cognitive strain that may not be attractive to many participants. Future research should examine the effects of media-enhanced web-based inductions (e.g., video or audio instructions) compared with interactive web-based inductions (e.g., media in addition to being able to talk to someone) and in-person guided inductions in increasing self-compassion and the likelihood of continued use of self-compassion exercises. The self-compassion field may also benefit from research using nonwriting inductions rather than writing exercises because writing exercises may be too time-intensive to benefit some participants. Because SCJ was not a successful induction across the three current studies, future research should examine and compare alternative self-compassion inductions.

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Conclusion

SCJ did not consistently increase self-reported follow-up self-compassion scores across three different studies despite varying amounts of practice with the induction and regardless of whether people learn it on their own online or in-person from an experimenter. SCJ also appears to be difficult to engage in for those learning the task on their own. SCJ does not appear to be an easily self-administered induction, nor does it appear to be beneficial regardless of the context in which one learns and engages with the induction.

NOTE

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REFERENCES

Adams, C., & Leary, M. (2007). Promoting self-compassionate attitudes toward eating among restrictive and guilty eaters. *Journal of Social and Clinical Psychology, 26,* 1120–1144.

Albertson, E. R., Neff, K. D., & Dill-Shackleford, K. E. (2015). Self-compassion and body dissatisfaction in women: A randomized controlled trial of a brief meditation intervention. *Mindfulness, 6,* 444–454. doi:10.1007/s12671-014-0277-3

Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky inventory of mindfulness skills. *Assessment, 11,* 191–206. doi:10.1177/1073191104268029

Brody, L. R., & Park, S. H. (2004). Narratives, mindfulness, and the implicit audience. *Clinical Psychology: Science and Practice, 11,* 147–154. doi:10.1093/clipsy/bph065

Diedrich, A., Grant, M., Hofmann, S. G., Hiller, W., & Berking, M. (2014). Self-compassion as an emotion regulation strategy in major depressive disorder. *Behaviour Research and Therapy, 58,* 43–51.

Farrer, L., Christensen, H., Griffiths, K. M., & Mackinnon, A. (2011). Internet-based CBT for depression with and without telephone tracking in a national helpline: Randomised controlled trial. *PLOS ONE, 6*(11), e28099. doi:10.1371/journal.pone.0028099

Gilbert, P. (2009). *The compassionate mind*. Constable.

Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy, 13,* 353–379.

Haas, A., Koestner, B., Rosenberg, J., Moore, D., Garlow, S. J., Sedway, J., Nicholas, L., Hendin, J., Mann, J. J., & Nemeroff, C. B. (2008). An interactive web-based method of outreach to college students at risk for suicide. *Journal of American College Health, 57,* 15–22.

Imrie, S., & Troop, N. A. (2012). A pilot study on the effects and feasibility of compassion-focused expressive writing in day hospice patients. *Palliative and Supportive Care, 10,* 115–122.

Jarosz, A. F., & Wiley, J. (2014). What are the odds? A practical guide to computing and reporting Bayes factors. *Journal of Problem Solving, 7,* 1–8. http://dx.doi.org/10.7771/1932-6246.1167

JASP. (2016). *JASP: A fresh way to do statistics*. Retrieved from https://jasp-stats.org/

Jeffreys, H. (1961). *Theory of probability* (3rd ed.). Oxford University Press.

Kadison, R., & DiGeronimo, T. (2004). *College of the overwhelmed: The campus mental health crisis and what to do about it*. Jossey-Bass.

Kelly, A. C., Zuroff, D. C., Foa, C. L., & Gilbert, P. (2009). Who benefits from training in self-compassionate self-regulation? A study of smoking reduction. *Journal of Social and Clinical Psychology, 29,* 727–755.

Krieger, T., Martig, D. S., van den Brink, E., & Berger, T. (2016). Working on self-compassion online: A proof of concept and feasibility study. *Internet Interventions, 6,* 64–70. doi:https://doi.org/10.1016/j.invent.2016.10.001

Lambert, R. G., McCarthy, C. J., Gilbert, T., Sebree, M., & Steinley-Bumgarner, M. (2006). Validity evidence for the use of the preventive resources inventory with college students. *Measurement and Evaluation in Counseling and Development, 39,* 66–83.

Lee, S., & Song, X. (2004). Evaluation of the Bayesian and maximum likelihood approaches in analyzing structural equation models with small sample sizes. *Multivariate Behavioral Research, 39,* 653–686. doi:http://dx.doi.org.er.lib.k-state.edu/10.1207/s15327906mbr3904_4

Luxton, D. D., June, J. D., & Kinn, J. T. (2011). Technology-based suicide prevention: Current applications and future directions. *Telemedicine and e-Health*. doi:10.1089/tmj.2010.0091

MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review, 32,* 545–552. doi:10.1016/j.cpr.2012.06.003

Marsh, C. N. (2012). Help-seeking decisions among college students: The impact of mental health service affordability. *Dissertation Abstracts International, 73*.

Marsman, M., & Wagenmakers, E. (2017). Bayesian benefits with JASP. *European Journal of Developmental Psychology, 14,* 545–555. doi:10.1080/17405629.2016.1259614

McEwan, K., & Gilbert, P. (2016). A pilot feasibility study exploring the practising of compassionate imagery exercises in a nonclinical population. *Psychology and Psychotherapy, 89,* 239–243. doi:10.1111/papt.12078

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Moore, S. D., Brody, L. R., & Dierberger, A. E. (2009). Mindfulness and experiential avoidances as predictors and outcomes of the narrative emotional disclosure task. *Journal of Clinical Psychology, 65,* 971–988. doi:10.1002/jclp.20600

Neff, K. D. (2003a). Development and validation of a scale to measure self-compassion. *Self and Identity, 2,* 223–250. doi:10.1080/15298860390209035

Neff, K. D. (2003b). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2,* 85–101.

Neff, K. D. (2009). *Exercises to increase self-compassion*. Retrieved from http://www.self-compassion.org/

Neff, K. D. (2011). Self-compassion, self-esteem, and well-being. *Social and Personality Compass, 5,* 1–12. doi:10.1111/j.1751–9004.2010.00330.x

Neff, K. D., & Dahm, K. A. (2014). Self-compassion: What it is, what it does, and how it relates to mindfulness. In M. Robinson, B. Meier, & B. Ostafin (Eds.), *Mindfulness and self-regulation* (pp. 121–140). Springer.

Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the mindful self-compassion program. *Journal of Clinical Psychology, 69,* 28–44. doi:10.1002/jclp.21923

Pascarella, E., & Terenzini, P. (2005). *How college affects students. Volume two. A third decade of research*. Jossey-Bass.

Pittman, L. D., & Richmond, A. (2008). University belonging, friendship quality, and psychological adjustment during the transition to college. *Journal of Experimental Education, 76,* 343–361.

Raftery, A. E. (1995). Bayesian model selection in social research. In P. V. Marsden (Ed.), *Sociological methodology* (pp. 111–196). Blackwell.

Richards, D., & Richardson, T. (2012). Computer-based psychological treatments for depression: A systematic review and meta-analysis. *Clinical Psychology Review, 32,* 329–343.

Richards, D., Timulak, L., & Hevey, D. (2012). A comparison of two online cognitive–behavioral interventions for symptoms of depression in a student population: The role of therapist responsiveness. *Counselling and Psychotherapy Research: Linking Research With Practice*. doi:10.1080/14733145.2012.733715

Richards, D., & Viganó, N. (2013). Online counseling: A narrative and critical review of the literature. *Journal of Clinical Psychology, 69,* 994–1011. doi:10.1002/jclp.21974

Robinson, W., Springer, P. R., Bischoff, R., Geske, J., Backer, E., Olson, M., Jarzynka, K., & Swinton, J. (2012). Rural experiences with mental illness: Through the eyes of patients and their families. *Families, Systems, & Health, 30,* 308–321. doi:10.1037/a0030171

Roediger, H. L., & Karpicke, J. D. (2006). Test-enhanced learning: Taking memory tests improves long-term retention. *Psychological Science, 17,* 249–255.

Rosqvist, J., & Thomas, J. C. (Ed.), & Truax, P. (2011). Effectiveness versus efficacy studies. In J. C. Thomas & M. Hersen (Eds.), *Understanding research in clinical and counseling psychology* (pp. 319–354). Routledge/Taylor & Francis Group.

Smeets, E., Neff, K., Alberts, H., & Peters, M. (2014). Meeting suffering with kindness: Effects of a brief self-compassion intervention for female college students. *Journal of Clinical Psychology, 70*(9), 794–807.

Toole, A. M., & Craighead, L. W. (2016). Brief self-compassion meditation training for body image distress in young adult women. *Body Image, 19,* 104–112. doi:https://doi.org/10.1016/j.bodyim.2016.09.00

Wagenmakers, E. (2007). A practical solution to the pervasive problems of *p* values. *Psychonomic Bulletin & Review, 14,* 779–804. http://search.proquest.com.er.lib.k-state.edu/docview/204943927?accountid=11789

Wang, R. A. H., Nelson-Coffey, S. K., Layous, K., Jacobs Bao, K., Davis, O. S. P., Haworth, C. M. A. (2017). Moderators of wellbeing interventions: Why do some people respond more positively than others? *PLOS ONE, 12*(11), e0187601. https://doi.org/10.1371/journal.pone.0187601

Wantland, D. J., Portillo, C. J., Holzemer, W. L., Slaughter, R., & McGhee, E. M. (2004). The effectiveness of web-based vs. non-web-based interventions: A meta-analysis of behavioral change outcomes. *Journal of Medical Internet Research, 6*(4), e40. http://doi.org/10.2196/jmir.6.4.e40

Watson, D., & Clark, L. A. (1994). *The PANAS-X: Manual for the Positive and Negative Affect Schedule-Expanded Form.* The University of Iowa.

White, C. A., Uttl, B., & Holder M. D. (2019). Meta-analyses of positive psychology interventions: The effects are much smaller than previously reported. *PLOS ONE, 14*(5), 1–48, e0216588. https://doi.org/10.1371/journal.pone.0216588

Wilson, V. R. (2012). Attachment, experiential avoidance, and mindfulness in the narrative disclosure task. Retrieved from Dissertation Abstracts International: Section B: *The Sciences and Engineering, 73*(6-B), 3969.

Wojtowicz, M., Day, V., & McGrath, P. J. (2013). Predictors of participant retention in a guided online self-help program for university students: Prospective cohort study. *Journal of Medical Internet Research, 15*(5), 136–145. doi:10.2196/jmir.2323

Yorgason, J. B., Linville, D., & Zitzman, B. (2008). Mental health among college students: Do those who need services know about and use them? *Journal of American College Health, 57,* 173–181.

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