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Acceptability and feasibility of an online version of the Self-Compassion for Healthcare Communities program

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ABSTRACT

Self-compassion, a way of relating to oneself like a good friend, may be an essential skill for healthcare professionals to develop in order to cope with the stressors of their job and avoid burnout, secondary traumatic stress, and other mental health problems during and after the COVID-19 pandemic. This study examined the acceptability and feasibility of an online version of the 6-session Self-Compassion for Healthcare Communities program (SCHC) during the COVID-19 pandemic in 2020. Similar to in-person studies of the program, participants ($n = 37$) reported significant increases in self-compassion and mindfulness, and significant decreases in burnout, secondary traumatic stress, depression, and stress from pre to post intervention. Number of sessions attended predicted gains in self-compassion and increases in self-compassion predicted changes in mindfulness, secondary traumatic stress, burnout, depression, and resilience decompression. Online programs such as SCHC may be an accessible way to support healthcare professionals' mental health even after the pandemic is over.

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Self-compassion; online intervention; healthcare; COVID-19

Introduction

Healthcare professionals (HCPs) are at risk for experiencing adverse mental health symptoms related to working through the COVID-19 pandemic (Sahebi et al., 2021). As a group, these professionals were already working in highly demanding work environments and were more likely to be burned out than the general working population (40% v. 28%; Shanafelt et al., 2019). The COVID-19 pandemic has multiplied the stressors HCPs face at work: shortages of personal protective equipment (PPE), anxiety about catching and spreading the disease, and witnessing higher rates of death and serious illness (Hall, 2020).

Evidence from previous pandemics (e.g., SARS) demonstrates that HCPs are susceptible to experiencing short-term and long-term psychological consequences such as insomnia, anxiety, suicidal ideation, depression, and PTSD, which could interfere with their work (Hall, 2020). HCPs are especially vulnerable to secondary traumatic stress (STS) because they work closely with people experiencing trauma (e.g., patients dying alone or being intubated). STS symptoms include physiological arousal, intrusive

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thoughts, and distressing emotions that would typically be observed in people with direct exposure to trauma (Figley, 1999). HCPs may therefore experience general stress from the everyday demands of their job and more serious stress symptoms related to working with traumatized patients. Considering the compounding and lasting effects of the pandemic on HCPs' mental health, it is important to investigate ways to support HCPs' resilience and coping during and beyond the pandemic.

Self-compassion may be an optimal skill for HCPs to develop given its role in reducing STS, burnout, depression, and anxiety (Neff et al., 2020; McDonald et al., 2021). Research conducted during the pandemic illustrates self-compassion is a protective buffer against mental distress related to social isolation and disruption to daily life (Jiménez et al., 2020; Lau et al., 2020; Nguyen & Le, 2021). However, Kotera et al. (2021) demonstrated that while self-compassion predicted HCP mental health, they experienced significantly lower self-compassion than the general population during the pandemic. Self-compassion may be a key point of intervention for protecting HCPs' well-being.

Self-compassion refers to treating oneself like a good friend when one feels inadequate or otherwise suffers, in contrast to responding to oneself with coldness or harsh criticism (Neff, 2003b). Neff's (2003a) self-report scale measures three interacting components that contribute to a self-compassionate response: the degree to which one acknowledges one's experience mindfully (versus avoiding or exaggerating pain), recognizes that being human includes experiences of pain and difficulty (versus feeling isolated), and treats oneself with kindness in one's self-talk and behaviors (versus harshly judging oneself).

Self-compassion is associated with reduced HCP burnout and compassion fatigue, and increased resilience during COVID-19 (Ruiz-Fernández et al., 2021). As an emotion-regulation skill, self-compassion may help HCPs better manage the familiar and novel stressors they experience while working during the pandemic, as well as cope with the difficult emotions that can arise when working with people experiencing pain (Raab, 2014). While self-compassion and mindfulness skill-building interventions exist for the general population (Neff & Germer, 2013), they are often not designed for the healthcare context, limiting who can access them. Many HCPs work 12-hour shifts and/or hold irregular schedules, making it difficult for them to attend 2–3 hour sessions over 8–12 weeks and spend time practicing formal meditations on their own. Furthermore, work demands often encroach on HCPs' personal time to prioritize their own needs (National Academies of Science, Engineering & Medicine (NASEM), 2019), making an intervention that can be easily integrated into the workplace even more pertinent for this community.

In response to these limitations, researchers adapted the empirically-supported Mindful Self-Compassion program created by Neff and Germer (2013) and developed the six-week Self-Compassion for Healthcare Communities (SCHC) program that includes modifications to fit the healthcare context (Neff et al., 2020). SCHC is unique in avoiding lengthy meditations and prolonged sessions. Instead, the program offers informal and brief exercises, as well as examples of how HCPs can use these practices on the job to cultivate compassion for self and others. Practices include paying attention to the soles of one's feet while walking between rooms, carrying a badge card with directions for brief mindfulness and self-compassion practices, and breathing

techniques and phrases that can be used inconspicuously during interactions with others to help HCPs manage their empathic distress. The curriculum also includes time for participants to share their experiences in small and large group discussions.

The SCHC program was evaluated in person in two 6-week studies (Neff et al., 2020). HCPs reported increased self-compassion and mindfulness skills alongside improvements in psychological outcomes, such as reduced stress and burnout (Neff et al., 2020). They also developed attitudes that could support their work in providing quality patient care such as compassion and compassion satisfaction. Importantly, these results were replicated in a study of participants who took SCHC in a one-day training before the COVID-19 pandemic (Franco & Christie, 2021). Changes in participants' well-being were maintained as the COVID-19 pandemic began in the U.S. in early 2020. In multiple formats, SCHC appears to consistently support the emotional resilience of HCPs and help them sustain their work caring for others.

As the pandemic developed, in-person interventions to reduce burnout, such as SCHC, were transferred online, creating a novel opportunity to evaluate the effectiveness of a virtual SCHC program. Online training may better accommodate HCPs' busy schedules, and self-compassion is a portable skill that can be practiced in everyday life with or without guidance (Germer & Neff, 2019; K. Neff & Germer, 2018). Although self-compassion interventions have been taught in person (Bluth et al., 2021; Delaney, 2018; Neff et al., 2020), a number of studies have found that self-guided (Eriksson et al., 2018; Finlay-Jones et al., 2016) and app-based (Wylde et al., 2017) self-compassion programs offered through computer-mediated platforms improve HCPs' stress and burnout. No studies to our knowledge have examined synchronous interventions for HCPs led by an instructor over a video-based forum.

The current study investigated the research question of whether a live, online version of the SCHC intervention was feasible and acceptable to HCPs during the COVID-19 pandemic (e.g., would HCPs sign-up, attend, and benefit from virtual SCHC). We investigated whether SCHC conducted online would contribute to improvements in well-being by increasing self-compassion, mindfulness, resilience, and compassion satisfaction and decreasing burnout, STS, depression, anxiety, and stress from pre to post intervention. We utilized measures previously included in evaluations of the in-person version of the training (Franco & Christie, 2021; Neff et al., 2020;) in order to understand how an online delivery of the program would compare.

Methods

Participants

Participants at local hospitals within the same network were recruited via emails and flyers to participate in the 6-week online SCHC program in April – May 2020 or May – June 2020. HCPs who enrolled in the programs were invited to participate in the formal research study, though participation in the study was not required to attend. REDCap electronic data capture tools were used to collect survey responses (Harris et al., 2009).

In the first group, 22 people agreed to participate in the research and completed the pre-survey. In the second group, 19 people agreed to participate. Four participants from group one did not attend the intervention and were removed from the dataset, leaving 37 total participants. See, Table 1. for a description of their characteristics. Continuing education credits were offered to HCPs who attended all 6 sessions of the intervention.

Intervention

The SCHC intervention was offered on Zoom by two trained facilitators for one hour a week for six consecutive weeks. The general structure was: check-in, introduce the topic of the day, practice, small group discussion (in Zoom breakout rooms), large group discussion, and closing. During the check-in at the beginning of each session, participants were encouraged to share how they had applied the practices they had learned or if they had encountered challenges attempting to use them. Topics included What is Self-Compassion, Practicing Self-Compassion, Discovering Your

Table 1. Participant Demographics, Previous Experience, and Attendance.

	Group 1 (Apr - May 2020)	Group 2 (May - June 2020)
Demographics		
Gender	Female (17), Male (1)	Female (18), Male (1)
Ethnicity*	Asian (2) Latino (4) Middle Eastern (1) White (12)	Asian (2) Black (1) Latino (4) White (13)
Age (range)	40.89 (26 - 67)	37.33 (21 - 56)
Years in HC (avg)	12.39 (1 - 27)	9.58 (1 -29)
Meditation Experience	3 Yes, 15 No	4 Yes, 15 No
Occupation		
APRN	2	–
Business/Administration	5	1
Child Life Specialist	1	1
Medical Assistant	–	1
Nursing (clinical)	2	5
Nursing (non-clinical)	3	2
Physician	1	2
Social Worker	4	5
Speech Therapist	–	1
Student/Intern	–	1
Work Location	Pediatric hospital or clinic (11) Adult hospital (3) Administration (4)	Pediatric hospital or clinic (14) Medical school (2) Administration (1) Private practice (2)
Previously attended employee support programs	Yes (8), No (9)	Yes (6), No (13)
YSCHC Participation		
Attendance Avg. (range)	5.27 (2 - 6)	5.11 (1 - 6)
Attended 4+ Sessions	15	16

Note: groups were not significantly different on demographic characteristics; *participants could check multiple boxes for ethnicity

Compassionate Voice, Self-Compassion and Resilience, Self-Compassion and Burnout, and Making it Count. Facilitators led participants in guided writing activities and short reflection exercises.

Measures

Self-Compassion Scale (SCS; Neff, 2003b). Six subscales (self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification) are measured to determine overall self-compassion. Items such as, 'I try to see my failings as part of the human condition' are responded to on a scale of 1 (*almost never*) to 5 (*almost always*). Subscales are calculated first and a total score is created from the mean of the subscales. In this study, the alpha reliability (α) ranged between .92 and .95 for each time point.

Cognitive and Affective Mindfulness Scale (CAMS; Feldman et al., 2007). Responses to items such as, 'I am able to focus on the present moment' are provided on a 1 (*rarely*) to 4 (*almost always*) scale, then a mean is calculated for the total score. The **α** ranged from .82 – .83.

Compassion Scale (CS; Pommier et al., 2019). Responses to four subscales (kindness, common humanity, mindfulness, and indifference) are provided on a 1 (*almost never*) to 5 (*almost always*) scale. Items include, 'I like to be there for others in times of difficulty'. The mean is calculated for the total score. The **α** ranged from .71 – .84.

The Professional Quality of Life (Stamm, 2009). Item examples include 'I get satisfaction from being able to help people' (compassion satisfaction), 'I feel "bogged down" by the system' (burnout), 'I think that I might have been affected by the traumatic stress of those I help' (secondary traumatic stress). Responses are provided on a 1 (*never*) to 5 (*very often*) scale and a mean is calculated for a total score. Compassion satisfaction **α** = .85 – .95, burnout **α** = .79 – .83, secondary traumatic stress **α** = .71 – 85.

The Depression, Anxiety, and Stress Scale (DASS; Lovibond & Lovibond, 1995). Respondents consider how they felt over the past week (e.g., 'I couldn't seem to experience any positive feeling at all' (depression); 'I experienced breathing difficulty' (anxiety); 'I found it hard to wind down' (stress)) and respond on a scale of 0 (*did not apply to me*) to 3 (*very much applied to me*). For each subscale, scores for corresponding items are summed. Depression **α** = .69 – .86, anxiety **α** = .64 – 72, stress **α** = .81 – .89.

Resiliency activation and decompression and job engagement (Press Ganey Workforce, 2019, June). Responses are provided on a 1 (*strongly disagree*) to 5 (*strongly agree*) scale and items are averaged for a total score. Resiliency activation items include, 'I see every patient/client as an individual person with specific needs' (**α** = .60 – .77); resiliency decompression items include, 'I am able to free my mind from work when I am away from it' (**α** = .78 – .87); and job engagement items include 'I would stay with this hospital if offered a similar position elsewhere' (**α** = .85 – .97).

Open-ended feedback was also collected in a text box at the end of the survey with the prompt: 'Feel free to share anything else you would like us to know'.

Participant attendance was calculated based on the number of sessions attended between 1 and 6.

Data analysis

The R package 'afex' was utilized to create a linear mixed regression model for each outcome variable. Missing data is handled with maximum likelihood estimation in the model. Across both groups, there were 37 pretests, 29 posttests, and 32 follow-up surveys. In the model, time was entered as the fixed effect, group and number of sessions attended were entered as covariates, and participants were the random effect. Each model was examined to assess whether or not the assumptions were met, including linearity, homogeneity of variance, and normal distribution of the residuals, as well as the influence of outliers. P-value threshold was lowered to .01 to reduce the possibility of type II error. Sensitivity analyses revealed outliers did not significantly influence results.

We also explored whether change in self-compassion predicted change in other outcome variables. To do so, we created residualized change scores by regressing pre-intervention scores on post-intervention scores and saving the residuals. The residualized self-compassion change scores were entered as predictors of each residualized outcome change score (See, Table 4 for results).

Table 2. Estimated marginal means and standard errors (N = 37).

Outcome	pre-test	SE	post-test	SE	follow-up	SE
Self-compassion	3.33	0.10	3.64	0.10	3.80	0.11
Mindfulness	2.75	0.08	3.01	0.08	3.00	0.08
Compassion	4.33	0.06	4.44	0.07	4.42	0.07
Comp. Sat.	4.28	0.08	4.41	0.09	4.44	0.08
Burnout	2.12	0.08	1.88	0.08	1.84	0.08
Secondary Traumatic Stress	1.97	0.08	1.80	0.09	1.72	0.08
Depression	3.35	0.43	1.81	0.45	2.04	0.44
Anxiety	2.80	0.37	1.83	0.40	2.30	0.39
Stress	6.00	0.56	4.90	0.59	4.37	0.56
Resiliency-Decompression	3.64	0.13	3.78	0.14	3.75	0.14
Resiliency-Activation	4.66	0.06	4.67	0.07	4.65	0.06
Job Engagement	3.92	0.17	3.83	0.18	3.87	0.17

Table 3. F-tests, T-tests, and effect sizes.

Outcome	Time (F-test)	Pre to post (t-test)	Pre to follow-up (t-test)	Cohen's D (pre to follow- up)
Self-Compassion	16.10**	3.64*	5.55**	.88
Mindfulness	12.72**	4.36**	4.33**	.70
Compassion	1.34	1.52	1.27	–
Compassion Satisfaction	2.89	1.77	2.28	–
Burnout	10.86**	3.57*	4.34**	.72
Secondary Traumatic Stress	7.82**	2.55	3.88**	.69
Depression	8.06**	3.66*	3.20*	.56
Anxiety	2.64	2.30	1.22	–
Stress	5.72*	2.25	3.30*	.63
Resilience-Decompression	1.00	1.34	1.05	–
Resilience-Activation	.07	.15	.24	–
Job Engagement	.33	.54	.28	–

**$p < .001$; *$p < .01$

Table 4. Residual outcome changes predicted by residual changes in self-compassion.

Outcome	(Pre to Posttest)	R^2	(Pre to Follow-up)	R^2
Mindfulness	.50*	.25	.51*	.29
Compassion	−.03	.00	.07	.00
Compassion Satisfaction	.17	.03	−.01	.00
Burnout	−.51*	.30	−.44	.20
Secondary Traumatic Stress	−.39	.16	−.50*	.25
Depression	−.60**	.36	−.46*	.21
Anxiety	−.18	.03	−.36	.13
Stress	−.14	.02	−.39	.15
Resilience-Decompression	.43	.19	.48*	.23
Resilience-Activation	.03	.00	−.13	.07
Job Engagement	.00	.00	.15	.02

**$p < .001$; *$p < .01$

Results

Estimated marginal means are presented in Table 2. As shown in Table 3, the main effect of time was significant for self-compassion, mindfulness, burnout, STS, depression, and stress. Attendance was a significant predictor for self-compassion only ($\beta = .17$, SE = .06, $p = .01$).

Follow-up tests of the main effect of time revealed that self-compassion, mindfulness, burnout, and depression scores changed significantly in the expected direction from pre-to-post intervention and this change was maintained at three-month follow-up. For STS and stress, significant decreases were not observed until three-month follow-up. No significant changes were observed in compassion for others, compassion satisfaction, resilience, or job engagement.

For the residual analysis, change in self-compassion from pre- to post-intervention predicted changes in mindfulness, burnout, and depression, while change in self-compassion from pre-intervention to follow-up predicted changes in mindfulness, STS, depression, and resiliency decompression.

Thirteen participants provided 15 comments in the post-training surveys. Thirteen comments were related to ways in which participants implemented the skills learned in the program. A clinical nurse noted: 'I [practiced] mindfulness and self compassion in situations . . . I would not have been able to handle several months ago'. Another nurse explained, 'I use several exercises from this course in the moment I need them, even if only for a few seconds, to help me get through intense moments in life and at work. Those few seconds matter the most and help me face my challenges'. Two comments were related to the social experience of gathering for the training (e.g., '[The] training has made me feel connected to others and not so alone in my struggles').

Discussion

Participants who attended a live, online SCHC program experienced significant improvements in self-compassion and mindfulness, suggesting they were able to learn these important emotion regulation tools in a virtual format, despite the limitations of physical distancing. They also experienced lower levels of burnout, stress, STS, and depression even as the pandemic reached its first peak in the U.S. in the summer of 2020. Changes in

self-compassion at two-week post-intervention predicted changes in mindfulness, burnout, and depression between pre- and post-intervention. Changes in self-compassion between pre-intervention and three-month follow-up predicted changes in mindfulness, STS, depression, and resilience decompression between pre-intervention and follow-up. Therefore, participants who improved their self-compassion had better outcomes in other aspects of well-being.

Prior research demonstrates similar benefits from self-compassion programs in the healthcare context. For instance, certified nursing assistants who attended the SCHC program developed greater self-compassion and decreased their stress and depression up to three months later (Bluth et al., 2021). Surgical residents who received self-compassion training improved their burnout through reducing emotional exhaustion (Kratzke et al., 2022). Additionally, a growing body of literature illustrates the connection between self-compassion and caregiver burnout, highlighting how self-compassion supports people working in healthcare across the globe (Gerber & Anaki, 2021; Hashem & Zeinoun, 2020).

Healthcare professionals work in a stressful environment where they care for people experiencing adversity and are expected to perform at a high level. The SCHC training is not designed to change the situational factors that cause HCP burnout. Instead, it resources healthcare professionals with practical tools they can use on the job to process difficult emotions with self-kindness and perspective. The training is also intended to cultivate in HCPs the recognition that caring for themselves is worthwhile, even in the midst of their duties caring for others. Some of the stress inherent to working in healthcare may be mitigated by teaching HCPs how to utilize self-compassion in small moments throughout their day.

Compassion satisfaction, anxiety, resilience, and job engagement did not change significantly among SCHC participants, despite improvements in other aspects of their well-being. In alignment with findings from in-person studies (Bluth et al., 2021; Franco & Christie, 2021; Neff et al., 2020), the lack of changes may be explained by a ceiling effect for compassion satisfaction and resilience because participants started out high on these measures before attending SCHC. Moreover, uncertainty in participants' professional and personal lives caused by the COVID-19 pandemic may also be relevant, particularly for overall levels of anxiety. Potentially, the skills SCHC provided kept participants' levels of engagement with their work and anxiety steady, rather than worsening over the course of the study.

This study replicates previous findings that SCHC contributes to HCP well-being when facilitated in person by improving self-regulation and awareness skills (self-compassion and mindfulness), motivation to care for others (compassion), and overall well-being (stress, anxiety, burnout, and STS; Franco & Christie, 2021; Neff et al., 2020). Virtual SCHC training provides the same tools that can be used on the job without formal meditation practice through an accessible platform. HCPs could attend the training from their cars, offices, or homes without disrupting their schedules. The low rates of attrition (90% of those who signed up to participate in the study attended the intervention) and high rates of attendance (84% attended at least 4/6 sessions) suggest delivering SCHC online is feasible for HCPs to fit into their demanding schedules. Virtual training may also increase the likelihood of reaching a greater number of HCPs and sustaining their engagement in the program.

Limitations

This study examined the acceptability and feasibility of the live, online version of SCHC and did not have a control group. Additional research is needed to confirm that the program is beneficial beyond the act of gathering in a time of heightened isolation. A randomized design with an active control group is recommended for future research.

The current sample was primarily White and female, which limits the generalizability of these findings. Future research should investigate how this program would meet the needs of HCPs from other racial/ethnic groups and genders. Additionally, because participants self-selected to participate, their motivation may make them more susceptible to changing their outlook.

Finally, this data was primarily collected from pediatric healthcare professionals during the earlier months of the pandemic when COVID-19 risks pertaining to youth were less clear (Leeb et al., 2020). A sample of HCPs working in more extreme COVID-19 centers where beds were full and materials in shortage may have shown different outcomes.

Conclusion

A live, online version of SCHC may be an acceptable and feasible way to provide HCPs with the skills of self-compassion and decrease their levels of depression, stress, STS, and burnout. Findings should be interpreted with caution in light of the small sample and lack of control group. Even as pandemic conditions evolve and group programs are no longer confined to screens, an online self-compassion intervention can yield the added benefits of accessibility, portability, and scalability, making it easier to reach more healthcare communities. To address the widespread issue of burnout, SCHC appears to provide reliable and valuable support to HCPs whether facilitated in person or online.

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