

Mindful Self-Compassion Training and Nephrology Nurses' Self-Reported Levels of Self-Compassion, Burnout, and Resilience: A Mixed Methods Study

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NC PD 1.4 contact hours

Individuals with chronic kidney disease (CKD) requiring life-sustaining hemodialysis (HD) three times per week can have highly complex medical and psychosocial needs. The burden on their lay caregivers is also immense. Managing the needs of these patients/families on a long-term basis, let alone during the pandemic, can place an emotional toll on nephrology nurses caring for them, which may result in burnout. In fact, a study by Flynn and colleagues (2009) reported that 31% of nephrology nurses reported high levels of burnout. Similarly, a Canadian study reported that nearly 41% of nephrology nurse respondents experienced burnout in the form of emotional exhaustion, and 23% had made plans to leave their position (Ridley et al., 2009). Burnout can increase when faced with caring for patients in the midst of the COVID-19 pandemic. In a U.S.-based, cross-sectional survey examining nephrology nurses' physiological well-being during the

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Caring for people with chronic kidney disease, let alone during a pandemic, can place nurses at risk for burnout. This study explored the effects of the Mindful Self-Compassion (MSC) 8-week training on nephrology nurses' levels of self-compassion, burnout, and resilience. Twelve nurses participated. Surveys were completed before, immediately after, and three months after training. A focus group was also conducted. Results demonstrated increased levels of self-compassion, mindfulness, and resilience while levels of burnout decreased. The central qualitative theme was enhanced resilience. Subthemes were creating a community of support, awareness and discovery, and the mastery of the techniques. The MSC training was an effective intervention to build essential skills for maintaining a healthy workforce. Implementation of such training programs within the health care environment are highly encouraged.

Key Words:

Hemodialysis, nurses, self-compassion, resilience, burnout.

COVID-19 pandemic, 62% of respondents reported feeling work-related burnout, 47% reported symptoms of anxiety, and 16% reported major depressive episodes (Montoya et al., 2021). Workload was identified as the major driver of

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increased levels of anxiety and burnout; increased odds of developing these ailments were found among respondents who had at least one health condition that was related to increased risk of COVID-19 complications (anxiety) and caring for COVID-19 positive patients (burnout) (Montoya et al., 2021).

While causes of stress vary, such work-related stress can result in absenteeism, frustration, and increased errors in clinical decision-making (Karkar et al., 2015). Patient care can also suffer as a result (Karkar et al., 2015). Resilience can be a buffer for work-related stress (Shatte et al., 2017). As such, nephrology organizations share an important role in promoting wellness among nurses.

There is a growing body of knowledge reporting the psychological and physiological benefits of mindfulness practices among nurses and other health professionals (Ruiz-Fernandez et al., 2020; van der Riet et al., 2018). Mindfulness techniques can reduce stress, anxiety, and burnout, while enhancing resilience (Delaney, 2018; van der Riet et al., 2018). However, while mindfulness-based interventions have been studied in the nursing population, only one study was found that examined the effects of the Mindful Self-Compassion (MSC) 8-week course among nurses (Delaney, 2018). There was a need to explore the effects of an MSC 8-week course intervention among not only nurses in general, but also among nephrology nurses. The MSC 8-week course has the potential to reduce nephrology nurses' stress levels, while enhancing resilience and improving patient care.

Literature Review

In a review of the literature, two comprehensive reviews were found that examined the impact of mindfulness-based interventions on nurses. Studies within the review by Guillaumie and colleagues (2017) investigated the effects of mindfulness on nurses who worked in various hospital areas. The length and types of interventions varied. Some studies examined the practices of Reiki, biofeedback, or relaxation (Cuneo et al., 2011). Other studies examined the impact of a standardized mindfulness-based stress reduction (MBSR) program (Beddoe & Murphy, 2004; Cohen-Katz et al., 2005a, b; Mackenzie et al., 2006). Guillaumie and colleagues (2017) concluded that mindfulness-based interventions can significantly reduce state anxiety and depression among nursing staff while also fostering improved communication with peers and patients, and enhanced analysis and emotional regulation when participants were faced with complex situations.

Similarly, van der Riet and colleagues (2018) conducted an integrative literature review on the effects of mindfulness meditation for nurses and nursing students. Supporting the results of Guillaumie and colleagues (2017), van der Riet and colleagues (2018) reported mindfulness meditation interventions had a positive effect on nurses' stress, anxiety, and burnout, as well as on their sense of well-being and empathy. Only one study was found that focused specifically on the use of Germer and Neff's (2016)

MSC 8-week course in the nursing population. Delaney (2018) found that nurses reported significant reductions in self-reported trauma and burnout, while mindfulness, resilience, compassion and job satisfaction scores increased. No studies were found that examined the use of mindfulness-based interventions in the nephrology nurse population.

A systematic review examining mindfulness therapies on health professionals in general also found great diversity on how mindfulness therapies were implemented (Ruiz-Fernandez et al., 2020). The one study in the review that examined MSC therapy (Aranda Auseron et al., 2017) found that while health professionals showed reduced stress and increased mindfulness, the analysis of self-compassion was scarce. Ruiz-Fernandez and colleagues (2020) concluded that there is limited evidence of the effectiveness of mindfulness-based interventions, particularly on the outcome of enhanced self-compassion.

The literature review demonstrated little is known about the effectiveness of Germer and Neff's (2016) MSC 8-week course among nurses in general, and even less is known about the effectiveness of this intervention among nephrology nurses. If proven effective, such programs have the potential to reduce stress levels among nurses, enhance their resilience and ability to cope with stress, and potentially, in turn, improve patient care.

The purpose of this study was to explore the effects of Germer and Neff's (2016) MSC 8-week course on nephrology nurses' self-reported levels of self-compassion, resilience, and burnout.

Research Questions

The study had three research questions:

- What is the effect of the 8-week MSC course on nephrology nurses' self-reported levels of self-compassion, compassion fatigue, resilience, mindfulness, and burnout?
- What is the relationship between the key concepts of self-compassion, compassion fatigue, resilience, mindfulness, and burnout?
- How did nephrology nurses' experience the self-compassion training program?

Answers to these questions are important not only to increase our understanding about the effect of the course and relationship of concepts of self-compassion, resilience and burnout, but also (and more importantly) to help organizations to plan programs that will help nurses cope with day-to-day stress. In turn, nurses may provide an enhanced quality of care to patients.

Methodology

Research Design and Sample

This study used an embedded mixed methods research design (Creswell & Plano Clark, 2011). After obtaining ethics approval from Western University (2019-113773-

31324) and Lawson Health Research Institute, the researchers sought to recruit up to 35 nephrology nurses to participate in Germer and Neff's (2016) MSC 8-week course. This sample size would be sufficient to detect an effect size between $r = 0.3$ and 0.5 (Field, 2009), and feasible to manage MSC learning activities. Nurses who worked in an academic urban regional renal care program (10 hospital-based facilities and one community-based facility) in Canada were recruited via emails, posters, and educational in-services. Nurses were included if they were 18 years or older, able to speak English, and worked within the renal care program. Nurses were excluded if they had untreated severe depression/mental health illness as determined through a screening process conducted by the trained program facilitators. After learning about the program and going through a brief screening process, interested volunteers meeting the inclusion/exclusion criteria were given a letter of information and provided signed, informed consent.

Mindful Self-Compassion Training Program

The MSC 8-week course is a research-tested program that integrates the skills of mindfulness as introduced by Germer (2019) and self-compassion based on Neff's revolutionary research (Neff, 2021). The basic theory behind the MSC 8-week course is that through practice, one can cultivate skills in self-compassion to nurture self-kindness, the sense of common humanity, and mindfulness (i.e., holding one's difficult thoughts in balanced perspective rather than reacting with an avoidance or fight/flight response) (Delaney, 2018). In doing so, wellness is fostered (Germer, 2019).

Germer and Neff (2013) describe the key components as follows. Self-kindness encompasses the warmth and understanding one has toward oneself when one fails or is critical towards oneself. Rather than judging oneself, one's inner conversation is gentle and soothing, similar to how one would support a friend. A sense of common humanity is experienced when one realizes the human condition is not perfect and that we are not isolated in our experience. Mindfulness occurs when one is able to practice a balanced reflection of one's painful experiences without over identification of negative thoughts and feelings (Germer & Neff, 2013). Through a series of meditations, informal practices, reflections, group discussions, and home practices, the training enables participants to develop and engage in skills that will assist them as challenges arise in their personal and professional lives (Center for Mindful Self-Compassion, 2020).

In this study, two trained MSC teachers provided the MSC training program on Sundays from February 2-March 29, 2020, using Germer and Neff's (2016) Mindful Self-Compassion Teacher Guide. Developed by Christopher Germer, PhD, and Kristin Neff, PhD, the MSC program is an empirically-supported 8-week course designed to cultivate the skill of self-compassion. The training consisted of eight 3-hour sessions and one

optional 4-hour retreat (see Table 1). Participants also received online access and/or a CD containing the three Core Mindful Self-Compassion Meditations (*Affectionate Breathing*, *Loving-Kindness for Ourselves*, *Giving and Receiving Compassion*) and the Self-Compassion Break to assist with home meditation practice (Germer & Neff, 2016). Through various activities (such as meditation, experiential exercises, and group discussion), participants were taught self-compassion skills, and learned to utilize mindfulness to recognize and respond to difficult emotions, situations, and caregiver fatigue. The optional silent 4-hour retreat involved similar guided meditations and informal practice (e.g. compassionate body scan, and loving-kindness for ourselves). The retreat held participants in silence for 3.5 hours, and ended with a 30-minute facilitated discussion, *Coming Out of the Silence*. As a result of the first wave of the COVID-19 pandemic crisis and the Ontario lockdown, the last two sessions were offered virtually.

Data Collection and Analysis

Both quantitative and qualitative data were collected to determine the effects of the MSC 8-week training program. Quantitative evaluation consisted of a survey administered at three points in time; pre-training, immediately post-training, and three months post-training. Validated assessment tools included the Self-Compassion Scale (Neff, 2003), the ProQOL Version-5 Professional QOL Scale (Stamm, 2009, 2010), the Freiburg Mindfulness Inventory (Walach et al., 2006), the Connor-Davidson Resilience Scale (Conner & Davidson, 2003), and the Maslach Burnout Inventory (Maslach & Jackson, 1981, Maslach et al., 2019) (see Table 2 for a descriptive summary of scales used). Data were entered into an SPSS statistical software program version 27. Data were first cleaned, ensuring no missing data were present, and then checked for normal distribution using Shapiro-Wilks test (Field, 2009).

Quantitative data analysis incorporated both descriptive and inferential statistics, such as dependent t tests and correlational analysis to answer the research questions. One-way repeated measures (ANOVAs) analyses were used to determine if there was a difference in the main variables between all complete cases across the three time-points (pre-, post-, and 3-month post-MSC training). When Mauchly's test of sphericity was violated, a Greenhouse-Geisser correction was used. Pairwise comparisons were then conducted using Bonferroni correction (Field, 2009). For all tests, results were deemed significant when $p < 0.5$.

Qualitative data were gathered during a one-hour focus group to determine participants' experience of the training program. Data from the focus groups were digitally audio recorded and transcribed verbatim. Transcripts were de-identified and analyzed using thematic analysis (Braun & Clarke, 2006; Clarke & Braun, 2013; Maguire & Delahunt, 2017). Once all three researchers reviewed the data, themes were compared and agreed upon.

Table 1
8-Week Mindful Self-Compassion Course Outline

Session/Focus	Brief Description
1. Discovering Mindful Self-Compassion	<ul style="list-style-type: none"> Welcome and introductions. Review of guiding principles. Physiology of self-criticism and self-compassion. Practicing soothing touch.
2. Practicing Mindfulness	<ul style="list-style-type: none"> Review of mindfulness, the wandering mind, resistance, and suffering. Introduction of anchoring practices for overwhelming moments.
3. Practicing Loving-Kindness	<ul style="list-style-type: none"> Creating personal loving-kindness phrases. Exploring the topic of loving-kindness and compassion. Practicing loving-kindness meditation for oneself and for a loved one.
4. Discovering Your Compassionate Voice	<ul style="list-style-type: none"> Practicing Loving-Kindness for Ourselves meditation using personal phrases. Identifying one's progress on self-compassion journey. Understanding self-criticism and safety and motivating ourselves with compassion.
5. Living Deeply	<ul style="list-style-type: none"> Exploring giving and receiving compassion. Unearthing our core values and reflecting on silver linings in relation to suffering.
– Retreat	<ul style="list-style-type: none"> Half-day silent retreat for strengthening MSC practice; this retreat is optional for participants.
6. Meeting Difficult Emotions	<ul style="list-style-type: none"> Exploring shame and alleviating its impact through use of self-compassion. Transforming difficult emotions through use of mindfulness and self-compassion techniques.
7. Exploring Challenging Relationships	<ul style="list-style-type: none"> Exploring caregiver fatigue, equanimity, and compassion. Exploring self-compassion as a way to understand unmet needs in a relationship.
8. Embracing Your Life	<ul style="list-style-type: none"> Practicing ways to cultivate happiness, gratitude, savoring, and self-appreciation; transforming the mind's natural negativity bias. Discovering ways to embrace the negative and positive aspects within one's life and oneself.

Sources: Center for Mindful Self-Compassion, 2020; Germer & Neff, 2016.

Results

Thirteen nurses were recruited, and 12 completed the entire program. All participants were female, 76.9% were 45 or more years of age, 76.9% had a college nursing diploma, 61.6% had 11 or more years of renal experience, and the majority (61.5%) worked full-time hours. Over one-third (38.5%) of participants had thoughts of leaving their current job. All five of these nurses indicated they were unsatisfied with work. Only two (15.4%) participants had previous mindfulness experience. Eleven participants completed measures at the pre- and immediately post time points, and eight completed measures at all three time points. Twelve participants participated in the focus group.

Quantitative Results

Degree of Satisfaction and Stress

Nurses were asked to rate their degree of job satisfaction and level of stress on a 10-point Likert scale, 0 (very low) to 10 (very high). Nurses reported their degree of satisfaction with their job increased significantly after the intervention (see Table 3) and continued to increase three months after the intervention was completed (see Table 4). Conversely, nurses' levels of stress decreased immediately after the MSC training (see Table 3), but there was no statistical significance three months afterward. This may have been due to added stress of the COVID-19 pandemic after March 2020.

Self-Compassion and Mindfulness Scores

Overall, nurses' self-compassion total scores increased at all time points, with a statistically significant difference between the pre- and immediately post intervention time points (see Table 3), and a sustained increase at the 3-month post-intervention measure (see Table 4). Similar increasing scores were seen in the self-kindness, common humanity, and mindfulness sub-concepts, while decreasing scores were seen in the self-judgment, isolation, and over-identification sub-concepts.

Nurses' Freiburg Mindfulness Inventory (FMI) scores supported the increasing trends in their self-compassion scores. Nurses reported significantly higher levels of mindfulness between the pre- and immediately post-intervention timeframe, with sustained results three months later. In fact, there was a very strong positive correlation between the immediately post self-compassion score and the immediately post FMI score (see Table 5).

Burnout and Resilience Scores

While nurses' self-compassion scores and levels of mindfulness increased, participants' burnout scores decreased. Participant's Maslach Burnout Inventory (MBI) scores demonstrated decreasing levels of emotional exhaustion (EE) and depersonalization (DP) after the intervention. For example, emotional exhaustion scores decreased

Table 2
Measurement Tools

Name	# Items	Concepts Measured	Cronbach's α
Neff Self-Compassion Scale (Neff, 2003)	26	Consists of the opposing subscales of Self-Kindness vs. Self-Judgement, Common Humanity vs. Isolation, Mindfulness vs. Over-identification. Participants asked to indicate how often they behave in the manner stated. 5-point scale (1 = almost never; 5 = almost always).	0.97
Professional Quality of Life Scale (ProQOL version 5) (Stamm, 2009)	30	Composed of three subscales: 1. Compassion satisfaction: Enjoyment received from doing work well 2. Burnout: One component of compassion fatigue and related to feelings of hopelessness 3. Secondary traumatic stress: Second component of compassion fatigue. Includes one's response to work-related exposure to another's traumatic events(s). Participants rate statement as per frequency of occurrence on a 5-point scale: 1 (never) to 5 (very often).	0.88 0.75 0.81
Freiburg Mindfulness Inventory (Walach et al., 2006)	14	Mindfulness Participants to indicate how each statement best characterizes their experience. 4-point scale: 1 (rarely) to 4 (almost always).	0.86
Maslach Burnout Inventory – MBI-HSS (Maslach & Jackson, 1981; Maslach et al., 2019; Poghosyan et al., 2009)	22	Composed of three subscales: 1. Emotional exhaustion 2. Depersonalization 3. Personal accomplishment Participants indicate how often they experience certain job-related feelings. Each statement rated from 0 (never) to 6 (everyday).	0.80-0.92 0.36-0.82 0.75-0.82
Connor-Davidson Resilience Scale 25 (CD-RISC-25) (Connor & Davidson, 2003)	25	Resilience Participants rate level of agreement with each statement. 5-point scale: 0 (not true at all) to 4 (true nearly all the time).	0.89

Table 3
Comparison of Pre and Immediate-Post MSC Training Scores

Measure	Pre-MSC Training		Post-MSC Training		$t(10)$	p	Cohen's d
	M	SD	M	SD			
Degree Job Satisfaction	5.73	1.74	7.18	1.77	-3.53	0.005	-1.06
Degree Job Stress	5.32	1.74	4.09	1.30	2.29	0.045	0.690
ProQOL Compassion Satisfaction	33.18	8.01	38.64	7.24	-3.90	0.003	-1.180
ProQOL Burnout	27.45	5.30	22.73	4.94	3.99	0.003	1.200
ProQOL Secondary Trauma	27.15	5.59	22.00	5.93	4.51	0.001	1.360
NEFF Self Compassion Score	2.26	0.52	3.19	0.68	-4.95	0.001	-1.490
Freiburg Mindfulness Inventory	29.64	6.86	41.55	5.89	-7.08	<0.001	-2.140
MBI Emotional Exhaustion	3.31	1.20	2.15	1.11	4.56	0.001	1.370
MBI Depersonalization	2.40	1.44	1.64	1.19	2.34	0.042	0.705
MBI Personal Accomplishment	3.52	1.06	4.44	0.92	-3.50	0.006	-1.060
CD-RISC Score	57.45	10.92	71.09	12.86	-3.75	0.004	-1.090

Notes: Cohen's effect sizes can be interpreted as follows: i) $d = 0.2$, Small; ii) $d = 0.5$, medium; iii) $d = 0.8$, large.

Table 4
Comparison of Pre-, Post-, and 3-Month Post-Mindful Self-Compassion (MSC) Training for Participants Providing Data at All 3 Time Points ($n = 8$).

Measure	Pre-Training		Post-Training		3-Month Post-Training		$F (df)$	p
	M	SD	M	SD	M	SD		
NEFF Self Compassion Score	2.27 ^{a,b}	0.53	3.32 ^a	0.69	3.41 ^b	0.84	17.33 (2,14)	< 0.001
Degree Job Satisfaction	5.75 ^b	1.91	7.38	1.92	8.13 ^b	1.96	9.30 (2,7.85)	0.015 [†]
Degree Job Stress	5.19	1.56	4.13	1.25	4.13	2.23	1.22 (2,14)	0.324
ProQOL Compassion Satisfaction	32.88 ^{a,b}	9.26	39.00 ^a	8.49	40.25 ^b	8.65	9.08 (2,14)	0.003
ProQOL Burnout	27.13 ^a	5.91	22.25 ^a	5.52	20.88	6.13	8.20 (2,14)	0.004
ProQOL Secondary Trauma	25.83 ^b	6.01	21.38	6.89	20.00 ^b	4.38	7.97 (2,14)	0.005
Freiburg Mindfulness Inventory	29.88 ^{a,b}	8.03	42.25 ^a	6.86	41.88 ^b	8.68	17.9 (2,14)	< 0.001
MBI Emotional Exhaustion	3.46 ^a	1.24	2.10 ^a	1.29	2.28	1.10	7.58 (2,14)	0.006
MBI Depersonalization	2.98 ^b	1.18	1.95	1.24	1.70 ^b	1.06	8.83 (2,14)	0.003
MBI Personal Accomplishment	3.47	1.14	4.39	1.07	4.77	0.96	8.06 (2,8.56)	0.017 [†]
CD-RISC Score	55.75 ^{a,b}	11.65	74.50 ^a	13.50	73.88 ^b	18.83	12.86 (2,14)	< 0.001

Notes:

Significant Bonferonni post-hoc tests:

^aPre- and post-MSC training.

^bPre- and 3-month post MSC training

^cPost- and 3-month post-MSC training.

[†] Mauchly's Test of Sphericity: In cases sphericity not assumed, use of Greenhouse-Geisser correction noted by †.

Table 5
Post-Mindful Self-Compassion (MSC) Training Correlations to Neff Self-Compassion Score

Measure	M	SD	$r (9)$	p
Neff Self-Compassion Score	3.19	0.68	1.000	—
Degree Job Satisfaction	7.18	1.78	0.478	0.137
Degree Job Stress	4.09	1.30	-0.356	0.283
ProQOL Compassion Satisfaction	38.64	7.24	0.704	0.016*
ProQOL Burnout	22.73	4.94	-0.796	0.003**
ProQOL Secondary Trauma	22.00	5.93	-0.675	0.023*
Freiburg Mindfulness Inventory	41.55	5.89	0.833	0.001***
MBI Emotional Exhaustion	2.15	1.11	-0.507	0.112
MBI Depersonalization	1.64	1.18	-0.395	0.229
MBI Personal Accomplishment	4.44	0.92	0.446	0.169
CD-RISC score	71.09	12.86	0.632	0.037*

* $p < 0.05$

** $p < 0.01$

*** $p \leq 0.001$

immediately post-intervention, and this decrease was sustained three months later. Conversely, nurses' personal accomplishment scores demonstrated a steady increase pre-, post-, and 3-months post-MSCT training, although only the pre- and post-intervention scores reached statistical significance.

The ProQOL-v5 measure was divided into three domains: compassion satisfaction, burnout, and secondary trauma; the latter two together comprise the concept compassion fatigue (Stamm, 2009, 2010). Analysis was based on using raw scores (ProQOL Office, personal communication, September 28, 2021). Statistically significant differences were seen among all three domains. Immediately after the MSC training, participants' compassion satisfaction scores increased, while burnout and secondary trauma scores decreased. No statistical differences were identified between the immediately post- and 3-month post-MSCT training, indicating that successes in these areas were sustained.

Nurses' level of resilience was measured using the CD-RISC-25. As expected, statistically significant increases in nurses' resilience scores were found between the pre- and immediately post-intervention timeframes, and scores were sustained three months later.

Correlations Between Variables

A series of Pearson's correlational analyses were conducted to determine how well the immediate post-intervention self-compassion score compared to all other quantitative variables (see Table 5). As expected, there was a very strong and significant positive correlation between the nephrology nurses' self-compassion scores and their FMI scores ($r > 0.8$). There was also a significant and strong positive correlation between nurses' self-compassion scores when compared to nurses' CD-RISC 25 score and the compassion satisfaction score. This means that when high self-compassion scores occurred, high mindfulness, resilience, and compassion satisfaction scores also occurred. In contrast, there was a significant and strong negative correlation between participants' self-compassion scores and their ProQOL-v5 burnout and secondary trauma scores.

Several correlations did not reach statistical significance but deserve special note. Moderate positive correlations were found between nurses' self-compassion scores and nurses' job satisfaction and the MBI personal accomplishment scores. In addition, a moderate negative correlation was found between nurses' self-compassion scores and their perceived level of job stress and MBI depersonalization scores. Figure 1 graphically highlights the differences seen in the variables at all three time points.

In summary, this study supports the notion that Germer and Neff's (2016) MSC 8-week course helped nurses increase their ability to practice self-compassion while simultaneously increasing nurses' self-reported levels of mindfulness, resilience, and job satisfaction. This MSC

training was also effective in decreasing levels of burnout and emotional exhaustion. Although there was a decrease in nurses' degree of stress, after COVID-19 started, stress levels did not return to pre-MSCT training levels. It is important to note that the 3-month post-training data collection coincided with three months into the first wave of the COVID-19 pandemic, and results suggest that the MSC intervention may have functioned as a protective mechanism to stave off some of the negative impact of the COVID-19 pandemic as the crisis began to ramp up in the community.

Qualitative Results

Twelve nurses participated in the online focus group. The main qualitative research question was: "How did the nurses experience the MSC training program?" Using basic thematic analysis, the researchers identified one overarching theme, *Enhanced Resilience*, and three subthemes, *Creating a Community of Support*, *Awareness and Self-Discovery*, and *Mastering the Techniques*.

Enhanced Resilience

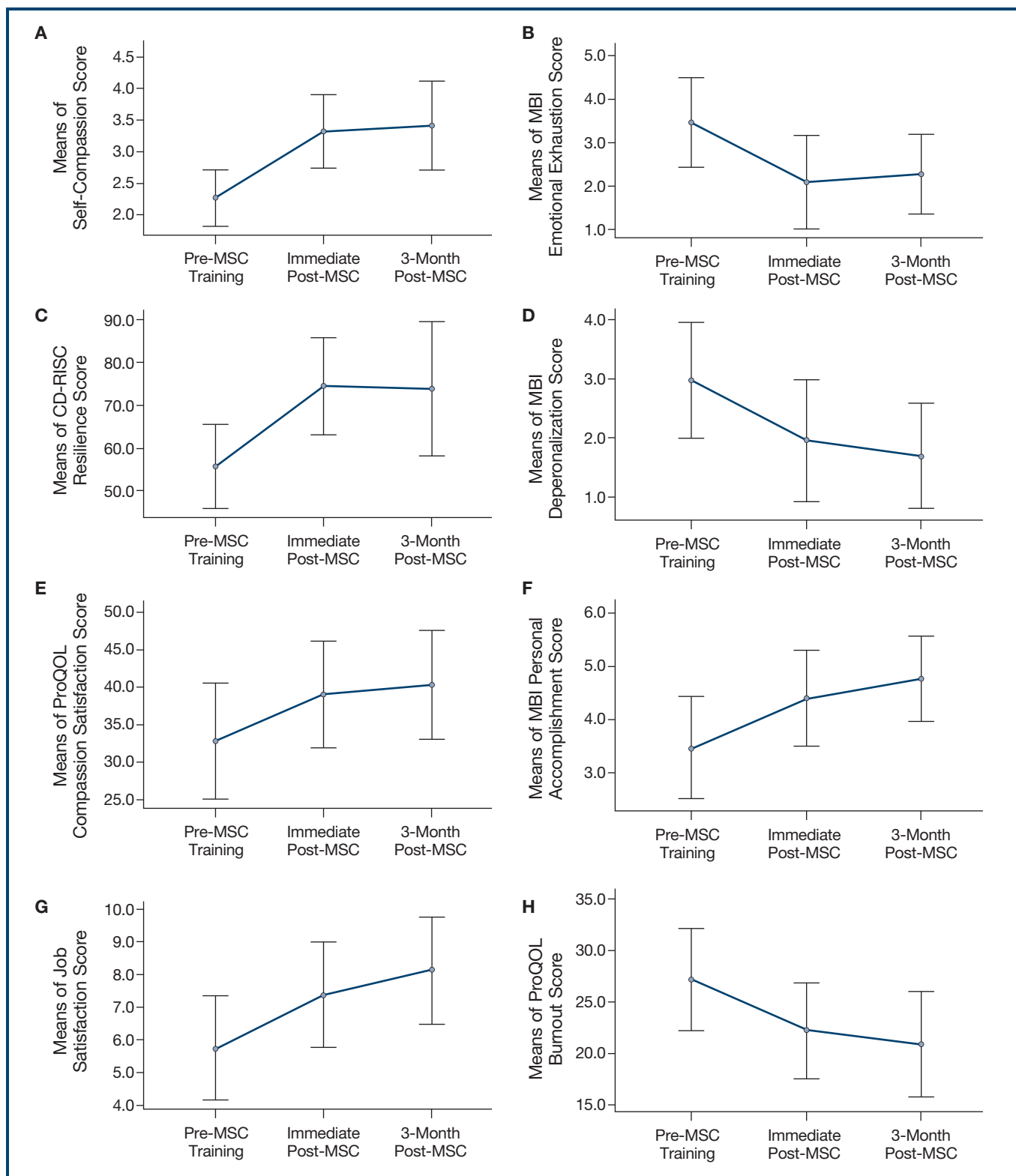
The overarching theme of enhanced resilience reflects the outcome of the MSC training program. Techniques taught within the program enhanced participants' ability to cope with day-to-day challenges, as well as added challenges introduced by the COVID-19 pandemic. Enhanced resilience was demonstrated by increasing self-confidence, a greater sense of calmness, and an influence on behavioral and cognitive coping mechanisms. One participant said: "[I] have more confidence ... planning and moving forward with things. I feel more grounded" (P006). Another participant said: "These weekly sessions have been really amazing in the sense to be able to talk about it...helped me get through, get over what happened last week, and to have a fresh start for the week ahead" (P006).

A sense of peacefulness and calmness was noted by many participants. One participant said: "The little few phrases I came up with...makes me feel a little more like relaxed, and it's okay, you know, tomorrow is another day" (P010).

The MSC course also changed the way participants coped cognitively and behaviorally with stressors. "I was learning to how to kind of cope, and I would go to the gym; instead of listening to the news, which was negative. I would tune in to YouTube and listen to...positive affirmations" (P010). One participant described how she was able to let go of things that she was unable to previously, knowing they had the tools to cope with the situation.

Even if we get into conflict at work about something, I might say something what I totally regret and then in the past, I used to dwell on it for days on end. And couldn't get over it, but this meditation has really helped me to let go of stuff, and just digest it, and then move on. (P009)

Figure 1
Repeated Measures Graphs of Main Variables



Note: Bars denote confidence intervals.

Creating a Community of Support

The MSC component of Common Humanity was evident as participants described their MSC experience as a creation of a community of support. Participants frequently expressed that feelings of connectedness, bonding, and group cohesiveness were instrumental in knowing they were not alone in their struggles. The support and shared experience also garnered strength within the group. One participant said: “This was wonderful having so many people from so many different areas and having them realize that we...all the struggles are the same...so it is very... cohesive, ...brings everything together kind of thing” (P005). Another commented:

Definitely the group atmosphere has really helped...everyone opening up and being so vulnerable is just like a difficult thing to do, but it was really nice. To know you're not in it alone. There are so many of us that are struggling with the same thing. (P001)

During the focus group, participants readily offered gestures of recognition within this community of support. One participant said to another: “You deserve a gold medal for all your work” (P009), while simultaneously, others were forming their hands into the shape of loving hearts.

Participants commented on the shared experience as being a very positive one. They expressed gratefulness to be part of the group. Participants reported feeling comfortable talking about their experiences and looking forward to the sessions. One participant commented:

I've been really appreciative of the resources and the tools, and like [P003] was saying, it's really nice to have that time to yourself, and just, you know, like have three hours that we're together. It's kind of like a gift to us, and my Sundays are really lovely. (P004)

Some participants were surprised how comfortable they felt talking about feelings with their co-workers and commented on how bonded they started to feel with one another. One participant said: “It's really, really helpful; this is such a wonderful thing we had, and what a pleasure to be part of this. It was such a gift...I'm really grateful I was part of this” (P009).

Awareness and Discovery

Participants reported an increased sense of self-discovery and awareness as they proceeded through the MSC training. By practicing self-compassion and mindfulness, participants recognized not only strengths hidden within themselves, but also vulnerabilities and suffering that still required attention. Participants talked about their awareness of burnout, stress, and personal limitations. One participant described:

Even at work, I feel the burnout in myself, less empathy, and I guess that's really something that I need to work on; being more empathic to other people in other situations. So I guess it's a work in progress in that way. (P006)

As participants became more self-aware, some initially experienced increased anxiety.

The last 8 weeks [were a] little [bit] of an emotional rollercoaster. Just being aware of my feelings, especially my negative feelings,... I started getting more anxious to the point that ..I thought, Oh my god, I don't know if I want to be aware of all my feelings. Like... they all kind of I felt like it sort of took the Band-Aid off some wounds, you know, maybe that were not dealt with. (P010)

Despite these feelings of anxiety, some participants discovered they had previously hidden strengths within themselves. “I have more resiliency than I thought that I had” (P006). Participants also became more self-aware of their responses and how one could change these responses to affect better outcomes within themselves and others. As one participant said: “And when I left things alone that I couldn't control or had no say in... that helped me out a lot” (P003). Another said:

I think it might be the compassionate listener during that meditation, like I just found before when I was listening to people, I always wanted to respond or cut in to when they were speaking, kind of thing, and try to solve everything. I do find now that I'm able to listen to people and not always give a response. (P011)

Mastery of the Techniques

Techniques associated with MSC can be very effective; however, participants noted some techniques take practice and time to master. One participant said:

I learned a lot about myself...but I'm still struggling with the application of it... When I do have a difficult moment, you know, like at work or in my personal life or something like that, I've started to realize, hey, this is a moment. I need to channel something, but I haven't really mastered how to get through to myself with the tools that I've been given, but I think it's a good start ... It [is] still a work in progress... (P004)

Participants highlighted several strategies that were helpful, such as stepping away from the situation, deep breathing, remembering to say the three loving kindness phrases that were important to them, or the hand to heart soothing touch technique. The following quotes illustrate the various ways in which the nurses were able to integrate

self-compassion and mindfulness into daily life. One participant reflected upon the impact of her three phrases.

'This is a moment of suffering,' ... 'We all struggle in our lives,' and 'May I live in love.'... I find saying those three phrases and holding my hand over my heart ... soothes me and brings me back to a calmer place when I'm feeling stressed out or anxiety from any situation. (P002)

During session 2, participants chose a stone to practice grounding and savoring in the present moment. One participant shared the power of her stone:

It's kind of part of my uniform that I put on now. It's in my little bag with my name badge and my ID and my pen. And I just automatically put it in my pocket, and if I go to grab my pen out of my pocket, my hand might brush it periodically, and I'll think..oh, ya. It just kind of is always there as a reminder...to be more compassionate to myself, more loving to myself in situations, and just...think about what's positive that's happened that day instead of drawing on some of the more negative things that I can get distracted by. (P007)

The MSC training program positively impacted not only the participants themselves, but also others in the patient care setting. Through the use of self-compassion and mindfulness practices, four participants shared situations where they transferred MSC knowledge to calm restless or anxious patients. One participant used the breathing technique to assist a restless and panicking ICU patient: "And somehow it's, like magically, it went through to her" (P009). Another said:

Last week [a patient] was having a panic attack. And I asked her, 'Is there anything I can do for you?' and I was really feeling awful for her being in this situation. ...so just using the loving kindness phrases and putting my hand over my heart, like I was able to calm myself down ... And just being able to be calm and present, I thought was really soothing for myself and helped her also. (P002)

Yet another participant was able to extend her MSC learning to assist a patient who had recently received a kidney transplant.

With the COVID-19 outbreak, my job has been a lot of a talking to the transplanted patients...who are extremely nervous with all the immunosuppression that they have... We're not talking face to face either, we're talking over a phone... She was so anxious. I said we're not going to talk for 30 seconds, which seemed like a long time, but we both just stopped and then...we refocused, and I had her, you know,

try that breathing, and it really, my goodness, it really helped, and we came up with a plan for her. (P005)

Discussion

This research sought to examine the effectiveness of a Germer and Neff's (2016) MSC 8-week course on nephrology nurses' self-reported levels of self-compassion, burnout, and resilience. Although the study involved a small sample size, results clearly demonstrated a positive impact. Nurses reported increases in levels of self-compassion, mindfulness, and resilience, and a decrease in burnout using validated scales. These results were supported in the focus groups.

Self-Compassion and Mindfulness

This study demonstrated the MSC training program was effective in increasing in self-compassion and mindfulness scores. These results were similar to studies conducted by Delaney (2018) and Neff and Germer's (2013) randomized control trial (RCT) on MSC. Immediately after the training program, nurses' self-compassion mean scores increased by 0.94 in this study, and by 0.70 in Delaney's (2018) study. Mindfulness scores as measured by the FMI also increased by 11.91 in this study as compared to 8.08 in Delaney's (2018) study. Similar results were found in Neff and Germer's (2013) RCT of MSC.

Key elements of self-compassion (self-kindness, common humanity, and mindfulness) were also brought forward in the focus group. Self-kindness means understanding ourselves and not being self-critical when things go wrong (Germer & Neff, 2013). Nurses described being able to let go of negative emotions and things they had little control over. They recognized moments of suffering and when they needed to practice self-kindness. Several nurses talked about the use of their three phases and how the hand over heart soothing touch technique helped them bring themselves to a calmer place.

Having a sense of common humanity was conveyed in the theme *Creating a Community of Support*. Common humanity refers to the recognition that the human condition is not perfect, and that one is not alone in one's suffering (Germer & Neff, 2013). Nurses in this study realized they are not alone in their struggles, recognizing that some of their struggles were similar, and they enjoyed a sense of increased cohesion as a result of the process. Nurses reported feeling safe and free to share in this environment. This type of community of support embodies the essence of positive workplace culture. According to Carlson (2021), "Manifesting a positive workplace culture entails cultivating a compassionate, kind atmosphere where respect and skillful communication are encouraged and institutionally modeled" (para. 7). This study suggests the increased sense of common humanity cultivated by MSC training may go far in enhancing workplace culture as well. More research is needed in this area.

The third element, mindfulness, was conveyed in this study through the sub-theme *Awareness and Self-Discovery*. Mindfulness can be defined as a purposeful and non-judgmental awareness of the present moment (Chiesa & Malinowski, 2011); being aware of one's painful thoughts and emotions in a "curious, open, and accepting stance" (Germer & Neff, 2013; Neff & Germer, 2013, p. 28). By being more self-aware, not only did nurses in this study find strength within themselves, but also vulnerabilities that still needed some attention. Several nurses were able to adjust the way they responded to other people or events to obtain better outcomes. Nurses' mindfulness scores also significantly increased. Similar results were found among nurses in Delaney's (2018) study.

Burnout and Compassion Satisfaction

According to the literature, burnout occurs when one has exhausted their emotional capacity and is no longer able to continue to give of themselves (Harwood et al., 2021). The result is stress, unhappiness, and a depletion of feelings of personal accomplishment (Harwood et al., 2021). Furthermore, studies have shown that contributors to burnout in hemodialysis units were high workloads, non-supportive work environments, and impaired nursing processes that threatened nurses' perceptions of providing quality patient care (Flynn et al., 2009). In short, working in a non-supportive environment that threatens the ability of the nurse to provide perceived high-quality care can lead to burnout and job dissatisfaction. In this study, the MSC training contributed to statistically significant decreases in post-MSD training measures of the ProQOL burnout and the MBI emotional exhaustion subscale scores while, simultaneously, ProQOL compassion satisfaction and the MBI Personal Accomplishments subscales scores increased. Similar positive results were also seen in studies done by Delany (2018) and the study of MSC training in health professionals by Aranda Auseron and colleagues (2017). These results suggest that the MSC training can potentially positively modulate the core contributors of burnout. When nurses are openly aware of their own emotions and responses while caring for patients, they may have more capacity to make a positive difference in that patient's care. For example, in this study, one nurse spoke to a transplant recipient over the phone; recognizing the patient's stress, the nurse implemented features learned in the MSC training. As a result, both the nurse and the patient benefited. In addition, the supportive environment created among nurses within the MCI training may act as a preventative factor to burnout.

Resilience

In today's busy health care environment, building and maintaining a resilient work force is receiving increasing attention in the prevention or buffering of staff stress and burnout (Advisory Board, 2018). Resilience is a complex concept loosely defined as the ability to thrive and bounce back in the face of adversity (Connor-Davidson, 2003; Riopel, 2021). Although one's ability to be resilient is high-

ly individual, several factors associated with resilience include having good relationships, maintaining perspective and a positive outlook, and managing oneself (Harwood et al., 2021). One critical skill in maintaining resilience is mindfulness (Harwood et al., 2021; Seig, 2020).

This study supports the concept that a MSC training program is one strategy that can help to effectively enhance nurses' resilience, and this is supported in Delaney's (2018) study. As self-compassion and mindfulness scores increased, so too did resilience scores. Nurses commented on how the MSC program helped maintain a more positive mental outlook and become more self-aware (Delaney, 2018). In this study, nephrology nurses indicated that taking an MSC training program brought them together, enhancing their sense of cohesion, and taught them practices that helped manage emotions in response to difficult situations; for example, the stone in one's pocket, remembering the three phrases, and taking a deep breath when confronted by a challenging situation. These practices helped build their own resourcefulness, and in turn, enhanced their resilience.

Implications to Practice and Research

Nephrology nursing and health care in general are fraught with change and uncertainty, especially amid the COVID-19 pandemic. Maintaining resilience and building a strong workforce is paramount to maintain high-quality patient care. This study demonstrated that through self-compassion and mindfulness training, the MSC program has the potential to build skills that enable nurses to better cope with difficult situations and become more resilient.

This research has significant implications for practice and research. First, implementing MSC training in a more widespread manner is needed. To sustain and build gains, leaders are encouraged to investigate ways of implementing such programs in a way that is both feasible and acceptable to staff who are open to such a program. The impact on building supportive environments was extremely positive; the MSC training program can be an essential way of building linkages and cohesion between staff, especially with large influxes of new staff occurring now.

Second, this study only examined the MSC training's effectiveness within the nursing population. More research is needed to determine its impact on the wider and larger health care population. A randomized control trial with a wait list option can potentially more effectively test larger groups and examine differences between them. Third, more research is also needed to determine the impact on outcomes, such as nurse retention and training costs, patient satisfaction, and unit culture. Finally, the MSC training is only one intervention to decrease burnout and enhance resilience. More research is needed to investigate the structural systems and environments where nurses work.

Limitations

This study has several limitations. First, this study included a small number of participants. Therefore, quan-

tative results must be interpreted cautiously and cannot be generalized to the nephrology nursing population or to the nursing population as a whole. Second, this meditative intervention may not appeal to all nurses. Other interventions are needed to help enhance nursing resilience. Finally, some nurses may find the time commitment involved in MSC training too demanding, or that it competes with other family or work responsibilities. Feedback about the time commitment from nurses will be essential. Other approaches, such as offering MSC training through a compressed timeframe or Internet format, may be needed for this population. Of note, the Centre for Mindful Self-Compassion is now offering *Self-Compassion Training for Healthcare Communities (SCHC)*, which is a 6-hour, evidence-based health care adaptation of the Mindful Self-Compassion 8-week course (MSC-Mindful Self-Compassion, 2021). Finally, it is important to note that the latter in-person training sessions and final focus group were switched to a virtual format due to restrictions imposed by the onset of COVID-19. The extent to which these changes impacted on the personal experience(s) of attendees and their comments during the focus group at the end of the program is unknown. The fact that we were able to switch both the program and focus group to an online medium at short notice is encouraging for future programs during an uncertain time. It is also a testament to the expertise and quality of the two MSC teachers who led the program and their resilience during a time of increased anxiety and change.

Conclusion

It is extremely important to ensure health care organizations maintain a healthy nursing workforce. Helping to enhance nephrology nurse's resilience may help buffer work-related stress and burnout as they face challenging situations when caring for individuals and families with kidney disease. This mixed method study demonstrated that an 8-week MSC training program was an effective intervention for nephrology nurses. The MSC training program significantly increased nephrology nurses' self-reported levels of self-compassion, mindfulness, and resilience while decreasing work-related stress and burnout. By identifying and implementing an effective program that provides nurses with the personal tools to help them deal with the day-to-day stressors in a busy dialysis environment, hospitals may realize a decrease in staff turnover, improved morale, and improved patient care. More research is required to further evaluate the benefits of MSC training programs in a variety of health care settings.

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