Routledge
Taylor & Francis Group

Journal of Workplace Behavioral Health

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/wjwb20

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To cite this article: Millie Cordaro, Krista Howard, Evan Schmiedehaus & Stephanie Dailey (04 Jan 2024): Faculty mental health and compassion fatigue: A call to the profession, a call to the institution, Journal of Workplace Behavioral Health, DOI: 10.1080/15555240.2023.2292120

To link to this article: https://doi.org/10.1080/15555240.2023.2292120

Published online: 04 Jan 2024.

JOURNAL OF WORKPLACE BEHAVIORAL HEALTH
https://doi.org/10.1080/15555240.2023.2292120

Faculty mental health and compassion fatigue: A call to the profession, a call to the institution

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ABSTRACT

The mental health of faculty in the United States higher education system has been an overlooked area of concern. This study addresses the occupational health of faculty, specifically faculty mental health (i.e., compassion fatigue, generalized anxiety disorder, major depression disorder, somatic symptom disorder), along with psychosocial and occupational factors. Two aspects of compassion fatigue (i.e., secondary traumatic stress and burnout) were used to classify participants into low or elevated secondary traumatic stress and burnout groups. Given the significant rates of compassion fatigue and psychopathology among faculty members, the importance of cultivating resilience at the individual and institutional levels is discussed.

ARTICLE HISTORY
Received 26 June 2023
Accepted 3 December 2023

KEYWORDS
Compassion fatigue; faculty mental health; generalized anxiety disorder; major depression disorder; resilience; higher education

Introduction

Long before the pandemic, higher education institutions positioned student development, mental health, and well-being as prominent institutional values. Yet, these initiatives are juxtaposed with increasing demands on faculty research productivity, service commitments, and delivering quality undergraduate and graduate education to students, often with inadequate institutional resources (Myers et al., 2022; Sabagh et al., 2018). The pandemic, a historical traumatic stressor event, ricocheted with complex and potentially traumatic disruptions, impacting the livelihood and mental health of both students and faculty (Cordaro, 2020; Schmiedehaus et al., 2023). While student mental health is a crucial, ongoing concern, the goal of this article is to illuminate the issue of faculty mental health. Occupational stress among faculty can impair their ability to teach and conduct research effectively, which can undermine student achievement (Klusmann et al., 2016).

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Faculty mental health

The mental health and well-being of faculty in the U.S. higher education system has been a persistently neglected area of concern as a population of interest. In fact, only in recent years has mental health among secondary education teachers been investigated (Howard et al., 2017; Howard & Howard 2020; Jones-Rincon & Howard, 2018). Many faculty across the nation mask symptoms of psychological distress and mental health disorders for fear of appearing weak or incompetent (Brandau et al., 2022; Edú-Valsania et al., 2022; Schmiedehaus et al., 2023). While the occupational health of U.S. faculty is underexplored, the prevalence rates of common mental health issues in the U.S. adult population can be a good starting point for consideration of faculty mental health (Schmiedehaus et al., 2023).

Two of the most common mental health disorders among the U.S. adult population are generalized anxiety disorder (GAD) and major depressive disorder (MDD). GAD is a type of anxiety disorder characterized as a chronic, persistent, and uncontrollable worry about daily issues and events. Additional clinical features specific to GAD include restlessness, irritability, muscle tension, and fatigue (DSM-5; American Psychiatric Association, 2013). The 2-week GAD prevalence rate among the U.S. adult population increased to 17.9% during the pandemic (Cordaro et al., 2021). On the other hand, MDD, commonly referred to as depression, is a type of mood disorder characterized as persistent feelings of sadness and loss of interest in pleasurable activities. Depressive symptomology includes appetite and sleep disturbances, loss of concentration, fatigue, and suicidality (American Psychiatric Association, 2013). Prevalence rates of MDD among the U.S. adult population soared to 22.7% during the height of the pandemic (Uwadiale et al., 2022).

A related concern, somatic symptom disorder (SSD), is characterized by significant psychological distress and excessive thoughts, feelings, and behaviors over one or more physical complaints (e.g., headaches, muscle tension, pain, fatigue, weakness, shortness of breath) and impedes a person's inability to function across major life domains (American Psychiatric Association, 2013). SSD is not as common as GAD and MDD, and it is often overlooked as a disorder (American Psychiatric Association, 2013). However, studies have shown high rates of comorbidity between anxiety and depressive symptoms with somatic complaints (Kujanpää et al., 2017). An occupational well-being study conducted on Australian teachers found that occupational stress was associated with psychosomatic complaints, including fatigue (Nwoko et al., 2023). Howard et al. (2017) conducted an occupational health study on U.S. primary education teachers and found that a key risk factor for SSD was female gender, higher levels of stress,

poorer physical quality of life, major depression, panic disorder, and generalized anxiety disorder.

One psychosocial correlate for these mental health disorders is loneliness, established as a public health issue and epidemic (Beutel et al., 2017). Loneliness, described as the subjective feeling of being alone, also carries a dissatisfaction with the quality of one's social relationships (Hwang et al., 2020; Pinquart & Sorensen, 2001). It is well established in the literature that subjective feelings of loneliness are a key risk factor in mental health disorders (Matthews et al., 2022). Yet, as with faculty mental health, faculty loneliness in higher education is an overlooked area of empirical inquiry, although there are several studies focusing on student loneliness and mental health (Eberle & Hobrecht, 2021; Morin, 2020).

Although these common mental health disorders have been studied widely in the general U.S. population and in secondary education, we understand less about prevalence rates and their effects in faculty in academia (Besse et al., 2015). Recently, researchers have found that faculty in higher education with higher rates of anxiety and depression are more likely to quit the profession (Schmiedehaus et al., 2023). Thus, it is important to establish prevalence rates of common mental health disorders, like GAD and MDD, and consider comorbidity complications with associated conditions like SSD and loneliness, among faculty in academia as a starting point for addressing faculty mental health at the individual and institutional levels.

Compassion fatigue (CF) in higher education

Although GAD, MDD, and SSD are three especially concerning mental health disorders shaping the experience of faculty members, other mental health conditions, like CF, which can present with similar symptomology, also warrant further examination (Cordaro, 2020; Ormiston et al., 2022). CF is a type of traumatization experienced as a debilitating emotional toll incurred from helping and supporting others in distress (Figley, 1988, 1995; Gentry, 2002; Stamm, 1995). Experts define CF as a reduced capacity or interest in being empathic or supporting others needing help (Figley & Figley, 2017). CF symptomology feels like emotional exhaustion, physical fatigue, emotional numbness, and burnout. CF consists of two domains: secondary traumatic stress (STS) and burnout. STS occurs when a person is exposed to extreme, traumatic events experienced by others and is subjugated by the secondary exposure to trauma (Figley & Kleber, 1995). STS is a type of vicarious trauma incurred when exposed and overwhelmed by other's extreme distress, especially among those in a supportive role. Prior to the COVID-19 pandemic event and pandemic-related traumatic

stressors, roughly 50% to 60% of children will experience an adverse or traumatic experience (i.e., adverse childhood experiences [ACEs]) by the time they reach adulthood (Centers for Disease Control and Prevention, 2019). Therefore, for some university faculty, they are providing support to students with a history of or who are actively experiencing trauma: domestic violence, assault, homelessness, violent crime, natural disasters, family member mental illness, sickness, or death. While prevalence rates for STS among higher education faculty are unknown, educator studies using validated instruments have estimated the prevalence of STS between 43% and 75% (Koenig et al., 2017; Ormiston et al., 2022).

In addition to STS, CF consists of a burnout component as well. Burnout usually has a gradual onset, while STS typically has a rapid onset following psychological overwhelm (Stamm, 2012). Burnout is usually more debilitating and associated with feelings of hopelessness and diminished work productivity and job satisfaction contributing to forced changes in work or career, with additional lifelong detrimental effects (Bhutani et al., 2012; Norrman Harling et al., 2020; Soderfelt & Soderfelt, 1995). With burnout, faculty members are susceptible to feeling cynical about their life's purpose and meaning and lacking a sense of personal accomplishment (Cordaro, 2020). Burnout has been empirically linked to loneliness, anxiety, and depression (Phillips et al., 2021). Fortunately, CF (i.e., STS and burnout) is highly treatable, once identified. Few studies, however, have studied CF in the broader context of higher education (for exception, see Schmiedehaus et al., 2023). Therefore, a goal of the current study is to determine the prevalence of CF among U.S. faculty members.

Occupational stress and the great resignation

Related to these issues, recent research demonstrates that faculty members today are losing a sense of meaning and purpose in their work and contemplating a career change after years spent in academia (Cidlinska et al., 2022; Velez-Cruz & Holstun, 2022). In fact, studies show that a staggering proportion of faculty members in higher education are planning to quit the profession altogether due to poor quality of life, compromised mental health, a decline in overall well-being, and a lack of institutional support (Heffernan & Heffernan, 2019; Rhoades & Eisenberger, 2002; Schmiedehaus et al., 2023). These kinds of worker frustrations have been associated with a range of psychological complications (Chambers Mack et al., 2019; Hyatt, 2022). Moreover, a recent study examining factors associated with faculty intentions to leave academia noted alarming rates of depression, anxiety, somatization, and loneliness (Schmiedehaus et al., 2023). In the study, 66.7% of faculty members met the criteria for a 2-week provisional

diagnosis of MDD, with an even higher rate of 86.4% for those individuals struggling with GAD (Schmiedehaus et al., 2023). Although not as pronounced, the same faculty members struggling with the provisional diagnoses of MDD and GAD also exhibited notably high rates of somatization, reported at 52.6% (Schmiedehaus et al., 2023). It is noteworthy that the 2-week prevalence rates for GAD, MDD, and SSD are higher than the prevalence rates previously mentioned in the general U.S. population. Understanding some of the underlying mental health issues linked to faculty intentions to quit may provide insight into the nascent CF phenomenon and inform future interventions.

The current study

The aim of this study is to use a biopsychosocial approach to address the occupational health of faculty members in academia, with particular attention paid to faculty mental health, (i.e., CF, GAD, MDD, SSD) along with additional psychosocial and occupational factors. Therefore, the present study examines two key aspects of CF: STS and burnout and associations with demographic, psychosocial, and occupational factors among U.S. higher education faculty members. In addition, significant occupational and psychosocial factors are examined as predictors of CF domains: STS and burnout.

Methods

Participants and procedure

The participants recruited for this study included higher education faculty members. Participants were provided an opportunity to win one of fifty $50 gift certificates through a raffle for their participation. The survey was conducted through Qualtrics and, after obtaining permission from the moderators, a single link was posted once in April 2022 on multiple Facebook pages dedicated to academics. The link to the survey was opened by 1,195 individuals. The assessment provided by Qualtrics through a fraud detection process which includes a Captcha Verification Question indicated that 228 responses were "potential bots" and these entries were removed from the dataset. Out of the remaining 967 participants, 637 participants were also removed for the following reasons: not being a higher education faculty member, having disproportionate missing data, or failing manipulation checks within the survey. The final dataset included a total of 330 higher education faculty members. The present study includes 315 of the 330 (95.4%) participants who have valid responses to the mental health, CF, and burnout measures. An a priori two-tailed power analysis using an

alpha = .05 and small-to-moderate effect size ($d = 0.4$) indicated that the minimum sample needed to obtain sufficient power (1-β = .8) was 286 participants.

The demographic breakdown of this sample includes age: $M = 43.4$ years; $SD = 8.7$; gender distribution was 22.3% male, 75.2% female, and 2.5% non-binary/prefer to self-describe. The racial breakdown of this sample was 3.6% Asian, 3.1% Black, 87.3% White, and 5.8% other/not specified. Within this sample, 15.6% participants identified as Hispanic, Latino, or of Spanish origin. This study was approved by the institutional review board at Texas State University.

Measures

Demographics

The participants in this study provided information about their age, gender, race, ethnicity, marital status, children living at home, highest level of education, current occupation, and years' experience in academia.

Psychosocial measures

CF: STS and burnout. The Professional Quality of Life (ProQOL) assesses CF with two subscales: STS and Burnout. These subscales are used in this study as outcome variables. Each of these subscales of the ProQOL include 10 items using a 5-point Likert scale from 1 = *never* to 5 = *very often*, indicating how often each event has occurred over the past 30 days (Stamm, 2010). An example statement from the ProQOL-STS subscale is: "I think that I might have been affected by the traumatic stress of those I [teach]." The ProQOL-STS subscale had good internal consistency (Cronbach's alpha = .88; $M = 24.6$, $SD = 8.3$). An example statement from the ProQOL-Burnout subscale is: "I feel worn out because of my work as an [instructor]." The ProQOL-Burnout subscale had good internal consistency (Cronbach's alpha = .70; $M = 29.2$, $SD = 6.1$).

Perceived stress. The Perceived Stress Scale (PSS) includes 10 items and uses a Likert scale from 0 = *never* to 4 = *very often* to assess general stress experienced in the past month. The range of the summed scores is from 0 to 40, and higher scores denote more perceived stress. An example of an item from the PSS is: "In the past month, how often have you been upset because of something that happened unexpectedly?" The PSS is commonly used for both research and clinical practices and is a valid and reliable scale (Cohen et al., 1983). For the current study, the PSS showed good internal consistency with Cronbach's alpha = .78 ($M = 20.7$, $SD = 6.6$).

Loneliness. The UCLA Loneliness Scale (UCLA-3) is a shortened three-item questionnaire that assesses loneliness and social isolation (Russell et al., 1978). Using a three-point rating scale (1= *hardly ever,* 2 = *some of the time,* 3 = *often*), participants respond to prompts including, "How often do you feel part of a group of friends?" Higher total scores equate to more loneliness. The UCLA-3 measure is reliable and valid (Russell, 1996). For the current study, the overall scale ($M = 5.7$, $SD = 2.0$) showed good internal consistency (Cronbach's alpha = .84).

MDD. MDD was assessed using the Patient Health Questionnaire for Major Depressive Disorder (PHQ-9) subscale. This measure determines whether individuals meet the criteria for a provisional diagnosis (i.e., 2-week prevalence rate) of MDD (Spitzer et al., 1999). The PHQ-9 uses nine items to evaluate experiences in past 2 weeks, which are measured on a four-point Likert scale from 0 = *not at all* to 3 = *nearly every day*. An example from this scale is "Little interest or pleasure in doing things." The scores are summed and can range between 0 and 27, with higher values indicating greater depressive symptoms. The validated cutoff for a provisional diagnosis of MDD is a score of 10 or greater. The PHQ-9 is a well-validated measure equivalent to the PRIME-MD (Kroenke et al., 2010). For the present study, the PHQ-9 had good internal consistency (Cronbach's alpha = .90; $M = 9.7$, $SD = 6.7$).

GAD. GAD was measured by the Patient Health Questionnaire for Generalized Anxiety (GAD-7) subscale. The GAD-7 subscale includes seven items measured using a three-point Likert scale which ranges between 0 = *not at all* and 3 = *nearly every day.* This scale assesses how often the participant has been bothered by specific issues during the past 4 weeks. An example item from this scale is "Becoming easily annoyed or irritable." For a provisional diagnosis of GAD, the cutoff score of 8 was used (Spitzer et al., 2006). The GAD-7 had good internal consistency (Cronbach's alpha = .86; $M = 8.1$, $SD = 4.0$).

Somatization disorder. Somatization symptom disorder was evaluated with the Patient Health Questionnaire—Somatization (PHQ-15) subscale (Löwe et al., 2008). This subscale identifies stress-related bodily complaints. Participants are presented with 15 items to which they respond if they have been bothered in the past 4 weeks by ailments such as stomach pain, back pain, headaches, dizziness, gastrointestinal issues, and depressive symptoms. Response options include 0 = *not bothered at all*, 1 = *bothered a little*, and 2 = *bothered a lot.* The scores are summed for a composite score, and cutoffs include minimal (0–5), mild (6–10),

moderate (11–15), and severe (16–30). The PHQ-15 had good internal consistency (Cronbach's alpha = .84; $M = 9.2$, $SD = 5.7$).

Occupational measures

Compassion satisfaction. The ProQOL Compassion Satisfaction subscale assesses the positive consequences of helping behavior. This self-report measure asks participants to indicate how often specific incidents have occurred over the past 30 days using a five-point Likert scale from 1 = *never* to 5 = *very often* (Stamm, 2010). An example statement from the ProQOL-Compassion Satisfaction subscale is: "I get satisfaction from being able to [teach] people." The ProQOL-Compassion Satisfaction subscale had good internal consistency (Cronbach's alpha = .94; $M = 34.2$, $SD = 8.7$).

Job satisfaction. The Job Descriptive Index—Coworker Satisfaction Scale (JDI) was used to assess both the participants' job satisfaction and their satisfaction with coworkers (Smith et al., 1969). The JDI presents the participants with 18 work-related adjectives and participants respond with *No* or *Yes* to indicate whether the word presented portrays their current work conditions. Examples of the items presented are *Stimulating, Boring,* and *Slow*. Better job satisfaction is indicated by higher total scores. For specific information about how to score the JDI, see Balzer et al. (1997). For this sample, the JDI had excellent internal consistency (Cronbach's alpha = .92; $M = 34.8$, $SD = 15.9$).

Employee engagement. The Intellectual, Social and Affective Engagement Scale (ISA) was used to assess employee engagement (Soane et al., 2012). The ISA asks participants to indicate their level of agreement for nine items presented on a seven-point agreement Likert scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. For this scale, the greater engagement in the workplace is indicated by higher scores on the ISA. An example of this scale is: "I focus hard on my work." For this study's sample, the ISA scale had good internal consistency (Cronbach's alpha = .87; $M = 151.3$, $SD = 10.3$).

Perceived organizational support. The Survey of Perceived Organizational Support—Shortened Version (SPOS) measures the extent to which an organization shows support and concern for employees' well-being (Eisenberger et al., 1986; Rhoades & Eisenberger, 2002). The SPOS includes eight agreement statements presented on a five-point agreement Likert scale, with response options ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Greater perceived organizational support is related to higher total scores on the SPOS. An example item from this measure is:

"My organization shows little concern for me." For this study's sample, the SPOS measure had good internal consistency (Cronbach's alpha = .90; $M = 20.2$, $SD = 7.8$).

Work-life conflict and life-work conflict. Work-life conflict and life-work conflict were assessed using two scales that measure different types of conflict that arise from the spillover between work and life (Netemeyer et al., 1996). The Work-Family Conflict Scale (WFC) evaluates how work interferes with employees' lives at home; for example, a professor might answer student emails during the weekend. The Family-Work Conflict Scale (FWC) evaluates how life interferes with employees' work; for example, a mother might receive a phone call from her child's school during a work meeting. There are three agreement items in the WFC scale and five agreement items in the FWC scale, each measured on a seven-point agreement Likert scale with responses ranging from 1 = *strongly disagree* to 7 = *strongly agree*. Greater conflict is associated with higher scores on both scales. An example of an item on the WFC scale is: "The amount of time my job takes up makes it difficult to fulfill personal responsibilities," and an example statement from the FWC scale is: "Things I want to do at work don't get done because of the demands of my personal life." Both scales provide good internal consistency: WFC (Cronbach's alpha = .93; $M = 11.2$, $SD = 3.6$) and FWC (Cronbach's alpha = .91; $M = 13.1$, $SD = 5.3$).

Organizational identification. The shortened version of the Organizational Identification Questionnaire (OIQ) measures how employee identity with their organization and how their interests align with those of their organization (Cheney, 1982). This scale includes four agreement statements that are measured on a five-point agreement Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*, with higher scores indicating greater organizational identification. An example statement from this scale is: "I view my organization's problems as my problems." For this study, the OIQ measure had good internal consistency (Cronbach's alpha = .84; $M = 11.4$, $SD = 4.0$).

Workplace bullying. The Workplace Aggression Questionnaire (Baron & Neuman, 1998) was used to assess bullying in the workplace and includes 43 actions to which the participant indicates the frequency of occurrence in the past 6 months, ranging from 1 = *not at all* to 5 = *many times a week*. Higher total scores on this scale corresponds with more bullying. Examples of actions include, "Spread rumors about you" and "Blamed you for other's errors." For this sample, the workplace bullying measure had excellent internal consistency (Cronbach's alpha = .98; $M = 81.7$, $SD = 36.1$).

Occupational burnout. General workplace burnout was assessed using the Maslach Burnout Scale (MBS). This measure includes three subscales: Exhaustion, Depersonalization, and Personal Accomplishment (Maslach & Jackson, 1981). The MBS includes 22 statements to which the participants respond to how frequently they experience the feeling or attitude described using a seven-point Likert scale that ranges from 0 = *never* to 6 = *every day*. There are nine statements on the Exhaustion subscale, five statements on the Depersonalization subscale, and eight statements that support the Personal Accomplishment subscale. Higher total scores on each of the subscales indicate greater frequency of those events and thereby more Exhaustion, more Depersonalization, or greater Personal Accomplishment. The Exhaustion subscale had good internal consistency (Cronbach's alpha = .94; $M = 40.7$, $SD = 14.9$). The Depersonalization subscale had good internal consistency (Cronbach's alpha = .76; $M = 14.9$, $SD = 6.7$). The Personal Accomplishment subscale had good internal consistency (Cronbach's alpha = .85; $M = 31.3$, $SD = 10.1$).

Intentions to quit. This measure was developed specifically for this study and asks participants to use an 11-point sliding scale from 0 (not likely) to 10 (100% likely) to indicate their likelihood of (1) leaving their current position but staying in academia and (2) leaving academia permanently (not due to natural retirement). The participants were asked to respond to each of these questions with two timepoints: within 1 year and within the next 5 years.

Statistical analysis

Of the 330 participants in this study, 315 responded to questions regarding CF from the ProQOL STS and burnout subscales, and those participants were placed into one of two groups for each subscale. Participants were placed into either low or elevated groups for both STS and burnout, both aspects integral to CF, for each measure in the study. Cutoff scores for both the elevated STS group and burnout group were 41 or higher to be considered for moderate or severe symptoms of CF. Therefore, scores less than 41 falling into low STS or low burnout consisted of mild symptoms of CF.

First, univariate comparisons were conducted between each of the two comparison groups for demographic, occupational, and psychosocial variables. Independent *t* tests were used for variables measured on a continuous scale, and Chi-square tests of independence were used for categorical variables. A Holm-Bonferroni step-down procedure was used to reduce potential

Type I error due to multiple comparisons. Pairwise deletion was used for any missing responses.

Next, two stepwise binary logistic regression analyses were conducted to determine the key factors associated with CF, one assessing associations with being classified in the elevated STS group (with the low-CF STS group as the reference) and the other regression assessed associations with being classified in the elevated burnout group (with the low-CF burnout group as the reference). Stepwise regression was chosen due to the multicollinearity between the psychosocial variables and between the occupational factors (Hair et al., 1998). Only variables significant at the univariate level were included in the logistic regression. An alpha level of $p = .05$ was used to determine significant differences for all comparisons. All analyses were conducted using SPSS (IBM, Inc., Chicago IL).

Results

All participants included in these analyses completed the ProQOL scale assessing two aspects of CF (i.e., STS and burnout subscales) and were classified into either the low-CF STS group ($n = 138$, unweighted) or elevated-CF STS group ($n = 177$, unweighted) and the low-CF burnout group ($n = 56$, unweighted) or elevated-CF burnout group ($n = 247$, unweighted), using the scoring algorithm. Demographic comparisons for both CF STS and CF burnout groups are presented in Table 1. Univariate comparisons for occupational factors (Table 2), and psychosocial factors (Table 3) were conducted to examine differences within the CF STS groups and CF burnout groups. Stepwise binary logistic regressions for both CF STS (Table 4) and CF burnout (Table 5) were conducted as well.

When comparing demographic factors for both CF STS and CF burnout groups, there were no significant differences in gender, age, race, ethnicity, marital status, and children living at home (all $p > .05$). There was a significant difference ($p = .001$) in educational level, such that a higher proportion of those with a doctoral degree reported higher levels of CF for both CF STS (70.6%) and CF burnout (72.5%) groups, compared to faculty with a master's degree.

Occupational factors related to CF

Comparisons of occupational factors for the low-CF STS and elevated-CF STS comparison groups indicated that the elevated-CF STS group had fewer years of experience in current position ($p < .001$), significantly lower job satisfaction ($p < .001$), lower employer engagement ($p < .001$), and lower perceived organizational support ($p < .001$) compared to faculty

Table 1. Demographic comparisons for secondary traumatic stress (STS) and burnout.

	Low STS $N = 138$	Elevated STS $N = 177$	Sig.	Low burnout $N = 56$	Elevated burnout $N = 247$	Sig.
Age Mean (SD)	44.3 (9.1)	42.6 (8.9)	$p = .098$	43.3 (9.8)	43.4 (8.7)	$p = .939$
Gender						
Male	21.0% (29)	23.7% (42)	$p = .512$	16.1% (9)	23.9% (59)	$p = .284$
Female	77.5% (107)	72.9% (129)		83.9% (47)	72.9% (180)	
Nonbinary	0.7% (1)	2.8% (5)		0.0% (0)	2.4% (6)	
Self-described	0.7% (1)	0.6% (1)		0.0% (0)	0.8% (2)	
Race						
White	89.9% (124)	84.7% (150)	$p = .875$	85.7% (48)	87.9% (217)	$p = .323$
Black	2.9% (4)	3.4% (6)		1.8% (1)	3.2% (8)	
Asian	2.2% (3)	5.1% (9)		5.4% (3)	3.2% (8)	
Other/not specified	5.0% (6)	6.7% (12)		7.1% (4)	5.6% (14)	
Ethnicity						
Hispanic/Latino/a	13.0% (18)	18.2% (32)	$p = .217$	9.1% (5)	16.6% (41)	$p = .161$
Non-Hispanic/Latino/a	87.0% (120)	81.8% (144)		90.9% (50)	83.4% (206)	
Marital status						
Single/in relationship	8.0% (11)	13.6% (24)	$p = .426$	8.9% (5)	11.3% (28)	$p = .685$
Single/no relationship	10.2% (14)	8.5% (15)		5.4% (3)	9.7% (24)	
Married	76.6% (105)	71.8% (127)		80.4% (45)	73.7% (182)	
Separated/divorced/widowed	5.1% (7)	6.2% (11)		5.4% (3)	5.3% (13)	
Children (at home) Mean (SD)	0.95 (1.1)	1.05 (1.0)	$p = .446$	1.16 (1.2)	0.96 (1.0)	$p = .205$
Education						
Master's degree	19.6% (27)	29.4% (52)	**$p = .046$; OR = .585**	12.5% (7)	27.5% (68)	**$p = .019$; OR = .376**
PhD	80.4% (111)	70.6% (125)		87.5% (49)	72.5% (179)	

All significant effect sizes were boldfaced.

members in the low-CF STS group. There were no significant differences between low- and elevated-CF STS groups for compassion satisfaction ($p = .124$). When evaluating work-life conflict and life-work conflict, there was a significant difference between the low- and elevated-CF STS groups for work-life conflict, such that the faculty members in the elevated-CF STS group reported greater work-life conflict than those in the low-CF STS group ($p < .001$). However, no significant differences were found between the low- and elevated-CF STS groups for life-work conflict ($p = .190$) and organizational identification ($p = .332$). Workplace bullying was also significantly different between the low- and elevated-CF STS groups, with the elevated-CF STS group indicating the greatest amount of workplace bullying ($p < .001$). When comparing the different domains of Maslach's occupational burnout subscales (i.e., Exhaustion, Depersonalization, Personal Accomplishment) between low- and elevated-CF STS groups, the elevated-CF STS group had significantly higher levels of Exhaustion ($p < .001$) and Depersonalization ($p < .001$), while the low-CF STS group was significantly higher in Personal Accomplishment ($p = .051$). Last, faculty members indicating elevated-CF STS showed significantly higher levels of intention to quit for the following: current position this year ($p < .001$), current position in 5 years ($p = .003$), total years in academia this year ($p = .003$), and total years in academia in 5 years ($p < .001$).

Table 2. Comparisons of occupational factors for secondary traumatic stress (STS) and burnout.

	Low STS $N = 138$	Elevated STS $N = 177$	Significance effect size	Low burnout $N = 56$	Elevated burnout $N = 247$	Significance effect size
Years of experience						
Total academia	15.1 (9.8)	13.9 (8.2)	$p = .243$	13.6 (9.4)	14.5 (8.9)	$p = .518$
Total current position	10.5 (8.6)	8.4 (5.8)	**$p = .013$; $d = .30$**	9.1 (7.3)	9.5 (7.2)	$p = .754$
Compassion satisfaction	34.9 (9.7)	33.4 (8.1)	$p = .124$	42.7 (5.1)	32.2 (8.3)	**$p < .001$; $d = 1.34$**
Job satisfaction	35.8 (11.0)	27.5 (14.6)	**$p < .001$; $d = .63$**	41.6 (6.7)	28.6 (13.8)	**$p < .001$; $d = 1.02$**
Employee engagement	45.8 (8.8)	42.2 (11.1)	**$p = .002$; $d = .35$**	51.0 (6.9)	42.1 (10.3)	**$p < .001$; $d = .91$**
Perceived organization support	22.1 (7.2)	19.0 (8.0)	**$p < .001$; $d = .41$**	25.4 (7.2)	19.1 (7.4)	**$p < .001$; $d = .86$**
Work-life						
Work-life conflict	10.2 (3.8)	11.7 (3.3)	**$p < .001$; $d = .43$**	8.9 (3.3)	11.6 (3.5)	**$p < .001$; $d = .79$**
Life-work conflict	12.5 (5.6)	13.3 (4.9)	$p = .190$	12.4 (4.9)	13.0 (5.4)	$p = .445$
Organizational identification	11.6 (3.9)	11.2 (4.0)	$p = .332$	12.3 (3.1)	11.1 (4.1)	**$p = .027$; $d = .28$**
Workplace bullying	63.5 (23.3)	95.6 (37.8)	**$p < .001$; $d = 1.00$**	58.1 (20.3)	86.0 (37.1)	**$p < .001$; $d = .81$**
Maslach burnout scale						
Exhaustion	35.8 (14.7)	44.2 (14.2)	**$p < .001$; $d = .58$**	29.3 (9.9)	43.4 (14.9)	**$p < .001$; $d = 1.00$**
Depersonalization	12.2 (6.3)	16.8 (6.6)	**$p < .001$; $d = .71$**	9.4 (3.8)	15.9 (6.8)	**$p < .001$; $d = 1.02$**
Personal Accomplishment	32.4 (11.1)	30.1 (9.5)	$p = .051$	38.1 (8.9)	29.7 (10.0)	**$p < .001$; $d = .86$**
Intention to quit						
Current position this year	2.2 (2.8)	3.8 (3.4)	**$p < .001$; $d = .52$**	2.0 (2.9)	3.4 (3.4)	**$p = .008$; $d = .43$**
Current position in 5 years	4.2 (3.4)	5.4 (3.4)	**$p = .003$; $d = .37$**	4.6 (3.4)	5.0 (3.5)	$p = .496$
Academia this year	2.3 (3.1)	3.6 (3.3)	**$p = .003$; $d = .40$**	1.1 (2.0)	3.5 (3.4)	**$p < .001$; $d = .73$**
Academia in 5 years	3.8 (3.5)	5.5 (3.4)	**$p < .001$; $d = .49$**	2.3 (2.5)	5.3 (3.6)	**$p < .001$; $d = .91$**

All significant effect sizes were boldfaced.

Comparisons of occupational factors for the low- and elevated-CF burnout comparison groups revealed no significant differences for total years of experience in academia ($p = .518$) and years in current position ($p = .754$). The elevated-CF burnout group showed significantly lower compassion satisfaction ($p < .001$) and job satisfaction ($p < .001$), lower employer engagement ($p < .001$), lower perceived organizational support ($p < .001$), and lower organizational identification ($p < .001$) compared to faculty members in the low-CF burnout group. Also noteworthy, while both elevated-CF STS and elevated-CF burnout groups shared similar results regarding lower job satisfaction, lower employer engagement, and lower perceived organizational support, the elevated-CF STS and elevated-CF burnout groups differed in that the elevated-CF burnout group was associated with the additional factors: lower compassion satisfaction and lower

Table 3. Comparisons of psychosocial factors.

	Low STS $N = 138$	Elevated STS $N = 177$	Significance effect size	Low burnout $N = 56$	Elevated burnout $N = 247$	Significance effect size
Perceived Stress Scale	18.5 (6.8)	22.3 (5.9)	**$p < .001$; $d = .60$**	14.5 (6.3)	21.8 (5.7)	**$p < .001$; $d = 1.27$**
UCLA Loneliness Scale	5.3 (2.0)	6.0 (1.8)	**$p = .002$; $d = .35$**	4.4 (1.5)	6.0 (1.9)	**$p < .001$; $d = .86$**
Generalized anxiety total score	6.6 (4.0)	9.0 (3.6)	**$p < .001$; $d = .63$**	5.4 (3.4)	8.4 (3.8)	**$p < .001$; $d = .81$**
% meeting criteria for GAD	41.6% (57)	67.0% (118)	**$p < .001$; OR = 2.9**	25.5% (14)	62.6% (154)	**$p < .001$; OR = 4.9**
Major depressive total score	6.9 (5.8)	12.0 (6.6)	**$p < .001$; $d = .80$**	4.2 (3.8)	10.8 (6.5)	**$p < .001$; $d = 1.09$**
% meeting criteria for MDD	32.4% (44)	61.6% (109)	**$p < .001$; OR = 3.4**	14.5% (8)	56.7% (140)	**$p < .001$; OR = 7.7**
Somatization score	6.6 (4.4)	11.6 (5.7)	**$p < .001$; $d = .97$**	5.9 (3.9)	10.1 (5.8)	**$p < .001$; $d = .75$**

STS = secondary traumatic stress.
All significant effect sizes were boldfaced.

Table 4. Stepwise binary logistic regression—factors significantly associated with secondary traumatic stress.

	B	SE	Sig	OR	95% CI Upper	95% CI Lower
Maslach Burnout Scale–Depersonalization	.066	.032	**.038**	1.068	1.004	1.137
Maslach Burnout Scale–Personal Accomplishment	−0.053	.018	**.004**	.949	.916	.983
Intention to quit–current position this year	.175	.062	**.004**	1.192	1.056	1.345
UCLA Loneliness Scale	−0.194	.100	.052	.824	.678	1.002
Somatization—total score	.200	.042	**<.001**	1.221	1.125	1.325
Constant	−0.206	.732				

Model = $X^2(5) = 74.500$, $p < .001$; -2LL = 210.758; Nagelkerke R-Square = .401.
All significant effect sizes were boldfaced.

organizational identification. When examining work-life conflict and life-work conflict, there was a significant difference between the low- and elevated-CF burnout groups for work-life conflict, whereby faculty members in the elevated-CF burnout group reported greater work-life conflict than those in the low-CF burnout group ($p < .001$). As with the CF STS groups, no significant differences were found between the two CF burnout comparison groups for life-work conflict ($p = .445$). Overall, results for work-life conflict among the elevated-CF burnout group mirror findings for the elevated-CF STS group, therefore encompassing both aspects of CF. Workplace bullying, as with the elevated-CF STS group, was also significantly different between the low- and elevated-CF burnout groups, with the elevated-CF burnout group indicating the greatest amount of bullying ($p < .001$). When comparing different aspects of Maslach's occupational burnout

Table 5. Stepwise binary logistic regression—factors significantly associated with burnout.

	B	SE	Sig	OR	95% CI Upper	95% CI Lower
Education (ref: PhD)	2.219	.831	**.008**	9.201	1.805	46.915
Compassion satisfaction	−0.257	.062	**<.001**	.774	.685	.874
Work-life conflict	.239	.101	**.018**	1.270	1.041	1.549
Maslach Burnout Scale–Depersonalization	.139	.067	**.039**	1.150	1.007	1.312
Intention to Quit–academia in 5 years	.206	.117	.077	1.229	.978	1.544
Perceived Stress Scale	.128	.061	**.036**	1.137	1.009	1.281
Constant	3.669	2.169				

Model = $\chi^2(6) = 99.581$, $p < .001$; −2LL = 77.666; Nagelkerke $R^2 = .665$.
All significant effect sizes were boldfaced.

with CF burnout groups, like the elevated-CF STS group, the elevated-CF burnout group had significantly higher levels of Exhaustion ($p < .001$) and Depersonalization ($p < .001$), while the low-CF burnout group was significantly higher in personal accomplishment ($p < .001$). Faculty members reporting elevated-CF burnout showed significantly higher levels of intent to quit across current position this year ($p < .001$), total years in academia this year ($p = .003$), and total years in academia in 5 years ($p < .001$), and these findings were similar for the elevated-CF STS group. However, the intention to quit occupational variable current position in 5 years did not show significant differences ($p = .496$) for the elevated-CF burnout group.

Psychosocial factors related to CF

Given that both elevated-CF STS and elevated-CF burnout groups demonstrated consistent associations of CF with psychosocial factors and psychopathology, results will be presented together. Comparison of psychosocial factors between the low- and elevated-CF STS groups and low- and elevated-CF burnout groups demonstrated that those faculty in the elevated-CF STS group and elevated-CF burnout group had significantly higher levels of perceived stress ($p < .001$) and loneliness ($p = .002$; $p < .001$, respectively). These findings mirror previous research whereby those symptomatic for burnout are in distress and self-isolating, all of which contribute to subjective feelings of loneliness (Harr & Moore, 2011). When comparing rates of psychopathology, the proportions of faculty meeting 2-week GAD criteria was significant with 67% in the elevated-CF STS group, 62.6% in the elevated-CF burnout group, compared to 41% in the low-CF STS group and 25.5% in the low-CF burnout group ($p < .001$ for all). Similarly, faculty meeting 2-week criteria for MDD was significant, with 61.6% in the elevated-CF STS group, 56.7% in the elevated-CF burnout group, 32.4% in the low-CF STS group, and 14.5% in the low-CF burnout group. Despite lower levels of GAD and MDD in the low-CF STS group and low-CF burnout group, these rates are also striking. The proportion of faculty with either moderate or severe levels of SSD (11.6%) significantly exceeded the proportion of faculty in the low-CF

STS group (42.6%; $p = .001$). There were similar results for the CF burnout groups regarding somatization disorder, whereby the proportion of faculty with either moderate or severe levels of SSD was significantly different than faculty in the low-CF burnout group ($p = .001$).

Predictors of CF

Stepwise binary logistic regressions were used to identify which of the significant occupational and psychosocial variables were predictors of CF. First, a stepwise regression was used to predict STS using the following variables: Maslach's occupational burnout (i.e., Depersonalization and Personal Accomplishment), intention to quit (i.e., current position this year), loneliness, and somatization. The omnibus model was significant, χ^2 (5) = 74.500, $p < .001$, with a −2LL = 210.758 and Nagelkerke $R^2 = .401$. The significant factors showed that Maslach Burnout Depersonalization was positively related to CF STS ($B = .066$, $p = .038$), while the Maslach Burnout Personal Accomplishment subscale was negatively associated with CF STS ($B = -0.053$, $p = .004$), the intention to quit current position this year was positively associated with STS ($B = .175$, $p = .004$), and somatization was positively associated with CF STS ($B = .200$, $p = <.001$). The overall classification model was 73.1%, with a sensitivity of 63.0% and specificity of 80.3%.

A second stepwise regression was used to predict CF-related burnout using the following significant variables: doctoral degree, compassion satisfaction, work-life conflict, Maslach's occupational Burnout (i.e., Depersonalization), intention to quit (i.e., academia in 5 years), and perceived stress. The step-down procedure provided a significant omnibus model, $\chi^2(6) = 99.581$, $p < .001$, with a −2LL = 77.666 and Nagelkerke $R^2 = .665$. The significant factors showed that education (i.e., doctorate) was positively related to CF burnout ($B = 2.219$, $p = .008$), compassion satisfaction was negatively associated with CF burnout ($B = -0.257$, $p = < .001$), work-life conflict was positively associated with CF burnout ($B = .239$, $p = .018$), Maslach Burnout Depersonalization subscale was positively associated with CF burnout ($B = .139$, $p = .039$), and perceived stress was positively associated with CF burnout ($B = .128$, $p = .036$). The overall classification model was 70.0%, with a sensitivity of 95.9% and specificity of 92.0%.

Discussion

This study assessed CF and its association to occupational and psychosocial correlates, while identifying significant occupational and psychosocial predictors for among U.S. faculty in higher education institutions. Faculty support students with lived experiences of extreme loss, violent crime, natural

disasters, and other traumatic stressor events like the pandemic. Therefore, it is important to understand both components of CF (STS and burnout) and how faculty can safeguard against it. Therefore, comparisons of CF were made by distributing participants into the low or elevated STS group and the low or elevated burnout group. The following discussion reflects key findings of the study, along with clinical recommendations, and broader dialogue emphasizing the importance of raising awareness around faculty mental health through continued discourse, research, and application of prevention-intervention strategies at the individual and institutional levels.

Previous research shows conflicting findings for major demographic risk factors for CF, and our findings did not demonstrate significant associations for most demographics apart from one. The first notable finding showed those faculty with a doctoral degree were more likely to experience CF, compared to faculty with a master's degree only. Previous studies have confirmed the finding that higher levels of education have been known to increase the risk of CF (Gustafsson & Hemberg, 2022). Faculty with terminal degrees are dealing with occupational stressors such as managing tenure and promotion concerns, increased work productivity, lack of funding for supported projects, lack of acknowledgement and recognition of work, and low wage related to discrepancies between salary and workload (Păduraru, 2014).

Next, those faculty in the elevated STS group showing moderate to severe levels of STS had fewer years of experience in their current academic position, along with lower job satisfaction, lower employer engagement, and lower perceived organizational support. While both elevated STS and elevated burnout groups shared similar results regarding lower job satisfaction, lower employer engagement, and lower perceived organizational support, the elevated STS and elevated burnout groups differed in that the elevated burnout group was associated with lower compassion satisfaction and lower organizational identification.

Also, faculty in the elevated STS and elevated burnout groups reported greater work-life conflict than those faculty with mild STS or burnout symptoms. These results are expected, as previous work has supported a positive relationship between burnout and work-life conflict (Netemeyer et al., 1996). However, the positive correlation between STS and work-life conflict is new. Work-life conflict occurs when expectations of two different roles (e.g., faculty member and parent) are not always compatible. STS from work does not stay at work, making individuals' lives at home more difficult. This is particularly true for faculty members, who often work from home and attend to work duties (e.g., writing, answering student emails) off-campus and outside of traditional work hours.

Faculty in the elevated STS and burnout groups also experienced more workplace bullying. Several prior studies have found relationships between

workplace bullying and burnout (for a review, see Keashly, 2021), but again, the current study draws attention to the relationship between STS and workplace bullying, which are constructs that have received less attention in the context of higher education. Recent research has explored STS and bullying among emergency nurses (Wolf et al., 2020), suggesting that unmanaged STS may drive a workplace narrative that allows for bullying. The findings here demonstrate a similar phenomenon in academe. Just as STS from patients' illnesses is tied to a toxic work environment among nurses, secondary stress from students' struggles (e.g., academic pressures, financial problems, mental health) relates to incivility among faculty.

While CF focuses on the clinical and psychological aspects of STS and burnout, Maslach's notion of burnout is an occupational variable. When compared to Maslach's burnout (i.e., Exhaustion and Depersonalization subdomains), the elevated-CF STS and CF burnout groups showed higher levels of Exhaustion and Depersonalization, while faculty with mild or no symptoms of CF had higher levels of Personal Accomplishment. Therefore, faculty with moderate to high levels of CF are likely experiencing occupational-related exhaustion: feeling worn out and depleted of energy, along with feeling debilitated when carrying out job duties and tasks. These same faculty are also at risk for experiencing depersonalization, including carrying out job duties in a detached, impersonal manner, while struggling with a sense of alienation and social withdrawal from colleagues and staff (Maslach, 2017). When faculty are experiencing CF, they are at risk for feeling overwhelmed, ineffectively coping, and unable to productively carry out job duties with purpose and satisfaction due to job-related stress.

Last, and most striking, CF is a key risk factor for quitting the profession. Faculty members with moderate to severe symptoms of CF-STS and burnout showed significantly higher levels of intent-to-quit for the following: current position this year, total years in academia this year, and total years in academia in 5 years. However, where the two groups differed was that the Elevated STS group was at risk for intent-to-quit current position in 5 years, while the Elevated Burnout group was not at risk. This suggests that regardless of moderate to severe burnout, the added STS symptoms increased overall risk for quitting the profession.

When discussing prevalence rates of GAD, MDD, and SSD, and their associations to CF, it is important to note that CF is a mental health condition, not a diagnosable psychological disorder. Psychosocial factors and psychopathology findings were similar among faculty with moderate to severe CF. First, those faculty with moderate to severe symptoms of CF had higher levels of perceived stress and loneliness. These findings demonstrate that similar to healthcare workers and helping professionals, faculty in higher education are equally vulnerable to subjective feelings of distress

and loneliness when symptomatic with CF (Figley, 1995; Rivera-Kloeppel & Mendenhall, 2023; Sorenson et al., 2016). Given that symptoms of CF include feeling emotionally exhausted, overwhelmed, and burned out, faculty with CF are likely withdrawing and socially isolating to mask CF, which can heighten subjective feelings of distress and loneliness (Gentry, 2002). Social support and connectedness are important aspects for preventing and diminishing CF and can help mitigate loneliness as well.

Regarding mental health disorders, the proportion of faculty meeting 2-week GAD criteria was significant, with 67% in the elevated-CF STS group, 62.6% in the elevated-CF burnout group, compared to 41% in the low-CF STS group, and 25.5% in the low-CF burnout group. Likewise, faculty meeting 2-week criteria for MDD was significant, with 61.6% in the elevated-CF STS group, 56.7% in the elevated-CF burnout group, 32.4% in the low-CF STS group, and 14.5% in the low-CF burnout group. Despite lower levels of GAD and MDD in the low-CF STS group and low-CF burnout group, these rates are also striking. As a reference for comparison, the high GAD and MDD prevalence rates found among faculty with moderate to severe CF are higher than what has been documented in the literature for some healthcare staff populations (Adibi et al., 2021; Olaya et al., 2021; Schmiedehaus et al., 2023).

The proportion of faculty with either moderate or severe levels of SSD (11.6%) significantly exceeded the proportion of faculty in the low-CF STS group (42.6%). This means that faculty are suffering from and preoccupied with somatic complaints such as pain or fatigue that is impeding their ability to function in major life domains including work. There were similar results for the CF burnout groups regarding SDS, whereby the proportion of faculty with either moderate or severe levels of SSD was significantly higher than faculty in the low-CF burnout group. While the faculty in this study demonstrated significant associations between CF and mental health disorders, people can experience the effects of CF without having a psychological disorder (Stamm, 2012). While there are a few studies addressing SSD and primary education teachers (Howard et al., 2017), more research needs to be conducted to explore the presence of SSD among faculty in higher education.

This study used significant occupational and psychosocial variables as predictors of CF. The following variables predicted SDS: Maslach Burnout (i.e., Depersonalization and Personal Accomplishment), intention to quit (i.e., current position this year), loneliness, and somatic symptom disorder. The significant factors showed that Maslach Burnout Depersonalization was positively related to STS, while the Maslach Burnout Personal Accomplishment subscale was negatively associated with STS, the intent to quit current position this year was positively associated with STS, and somatization was positively associated with STS.

A second stepwise regression was used to predict CF-related burnout using the following significant variables: doctoral degree, compassion satisfaction, work-life conflict, Maslach Burnout (i.e., Depersonalization), intention to quit (i.e., academia in 5 years), and perceived stress. The significant factors showed that education (i.e., doctorate) was positively related to CF burnout, compassion satisfaction was negatively associated with CF burnout, work-life conflict was positively associated with CF burnout, Maslach Burnout Depersonalization subscale was positively associated with CF burnout, and perceived stress was positively associated with CF burnout.

Mitigating CF: Cultivating a resilience practice

The deleterious effects of CF can wreak havoc on a person's mental health and well-being, job satisfaction, and overall quality of life. However, preventative steps can be taken, through intentional self-care strategies, to protect against the onset of CF or mitigate existing symptoms. Cultivating a purposeful, adaptive resilience practice can help faculty to carry out their job duties with satisfaction and meaning, while being emotionally engaged with students, colleagues, and staff, all the while fostering their own mental health and well-being (Flarity et al., 2013; Mahdiani & Ungar, 2021). A resilience practice is defined here as the intentional and frequent use of combinations of empirically supported emotional, psychological, behavioral, and physical adaptive coping strategies, activities, and techniques aimed at supporting one's mental health and well-being. A resilience practice can also be thought of as a daily mental health routine that is used to cope with adversity or mentally flourish with optimal circumstances. First, faculty with moderate to severe symptoms of CF and/or GAD or MDD symptomology who also have an untreated developmental history of ACEs are especially vulnerable to adversity, occupational stress, and CF (Bouchard & Rainbow, 2021). Faculty with higher ACEs scores should seek mental health treatment from a helping professional specializing in trauma-based eye movement desensitization and reprocessing, a type of somatic therapy, or cognitive-behavioral therapy (Baranowsky & Gentry, 2015). Otherwise, faculty members with higher ACEs scores will be at greater risk for moderate to severe symptoms of CF if left untreated.

Additional components of a resilience practice can include incorporating mindfulness skills into daily activity, as well as using daily guided and/or silent meditation (Bonamer & Aquino-Russell, 2019; Weyandt et al., 2020). In fact, using mindfulness as a self-care strategy for reducing CF has been documented in the literature (Abernathy & Martin, 2019; Robinson et al., 2022). Closely related to mindfulness, practicing self-compassion through loving-kindness meditations is an effective skill for buffering against CF and

bolstering resilience (Cordaro, 2020; Delaney, 2018; Neff, 2023). Additional activities and self-care strategies to incorporate into a resilience practice can include journaling, breathwork, acupuncture, yoga, being in nature, massage, cold plunges, participating in rhythmic movement or dance, and engaging creative pursuits (Balban et al., 2023; Gough, 2019; van der Kolk, 2014; Yassen, 2013). A type of non-sleep deep rest activity, Yoga Nidra, is an effective strategy for improving mental health and wellness for faculty (Ferreira-Vorkapic, 2018). While these options come down to personal preference, the emphasis is placed on being intentional and deliberate with choosing effective self-care strategies. Although beyond the scope of this article, there is strong evidence highlighting the importance of adequate sleep, a healthy diet, and a robust exercise regimen that should be incorporated into one's resilience practice to prevent CF (Lewis & King, 2019).

Where the responsibility lies: Self and institution

Before placing the responsibility of mental health on individuals in the academic profession, steps can be taken to innovate faculty mental health at the institutional level as well. Faculty mental health can be repositioned at the forefront of higher education institutional initiatives. Colleges and universities can potentiate institution-wide task forces addressing the mental health and wellness needs of students, faculty, and staff to assess the current state of mental health across campuses. Campus-wide programming, perhaps offered by Faculty Development or Human Resources, in collaboration with social work, psychology, and counseling departments and local community businesses and agencies can provide mental wellness opportunities to practice previously mentioned resilience activities framed with a professional take, can be adapted at the institutional level (Robinson et al., 2022). For example, providing faculty institution-wide lunchtime meetups to practice yoga, meditation, walk and talk, affinity groups, or book clubs to discuss shared experiences and issues. These institution-level, community-care activities would allow faculty opportunities to participate in their own resilience practice and provide a sense of belonging through peer support and feeling valued by their respective institutions. Last, ensuring that faculty have adequate accessibility to mental healthcare providers and are fully informed of their options for mental healthcare and how to access mental health resources via health promotional informational meetings or online webinars are pertinent as well.

Limitations

While the findings provide meaningful insight into the role of CF and mental health among U.S. higher education faculty, there are some

limitations to be addressed. First, the data are cross-sectional and do not support temporal or causal conclusions. Next, there are limitations pertaining to generalizability. This study used a survey circulated within social media groups for academics. Although the use of social media is a commonly used method for data collection, this method excludes faculty who do not use social media (King et al., 2014). In addition, faculty who experience increased occupational stress may be more motivated to respond to a survey about the topic, introducing selection bias. Also, the demographic makeup of the participants in this study is not representative of all U.S. higher education faculty (e.g., a preponderance of females compared to males; Yoon et al., 2019). We further note that faculty response rates to the current study were low, possibly due to existing burdens associated with the very topic at hand or perceived fear of breaches to anonymity. While this study captured many factors that influence occupational health of higher education faculty, future research should also consider the type of institution and workload expectations. Although this study is an important step toward understanding mental health among U.S. faculty members, the literature would benefit from future studies with larger, representative sample size, along with additional studies that focus on perspectives of faculty members from historically underrepresented, marginalized, and/or minoritized groups (i.e., first-generation, BIPOC, LBGTQ+, the neurodiverse, persons with disabilities).

Future directions

Given that the pandemic illuminated an array of disparities for faculty of diverse populations, contextualizing faculty mental health and CF with more nuanced issues such as racial trauma and cultural stress creates research avenues for addressing equity, inclusion, belongingness, and social justice initiatives at the institutional level. Developing and studying institution-wide prevention-intervention strategies aimed at strengthening professional resiliency for faculty mental health at college and universities is another important step toward shifting organizational cultural norms. Campus-based Mindfulness-Based Stress Reduction programs are one such effective organizational intervention proven to promote mental health and resilience (Dundas et al., 2016). A CF resiliency training program, adapted from other professions with successful outcomes, as an institutional intervention strategy is a more nuanced approached to addressing CF and mental health among faculty (Potter et al., 2015; Robinson et al., 2022). One such program is the Compassion Fatigue Training: Accelerated Recovery Program (ARP) offering a standardized five-session training and intervention protocol for significantly reducing symptoms of CF through the

Traumatology Institute across various populations of helping professionals (Baranowsky & Gentry, 2023; Potter et al., 2015; Rajeswari et al., 2020).

Conclusion

This study brings the notion of faculty mental health, through the lens of CF and psychopathology to the forefront amidst broader conversations unfolding around mental health and well-being in academia. Mental health across the country has been declining, and this study provides a reference point from which future research endeavors, institution-level priorities, and shifts in organizational cultural norms acknowledging faculty mental health initiatives can begin (Blanchflower & Bryson, 2022). While faculty in the profession of academia have a responsibility to manage their own mental health, it is also important for university and college institutions to address occupational stress that contributes to CF and mental health issues for faculty. When faculty feel well, derive meaning and purpose in their work, and feel supported by their institutions, students will benefit.

Compassion Fatigue Analyses; 1 November 2022

Compassion Fatigue is comprised of both the Secondary Traumatic Stress (STS) and Burnout.

Acknowledgements

The authors acknowledge Kaleigh Ridlon and her contributions to the article.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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