

Why Self-Care Matters: Managing Stress and Preventing Burnout in High-Risk Groups

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All organisms experience stress. It is a biological, physiological, and psychological response when an individual perceives an external situation as being beyond their ability to cope (Bottaccioli et al., 2021; Myers et al., 2012). In stressful circumstances, the body draws on internal resources to cope with a threat, whether it is real or only perceived (Salgado-Pascual et al., 2020). Over a lifetime, repeated psychological stressors such as negative relationships, environments, social issues, or life events can develop negative consequences to an individual's health (Elliott et al., 2021). When stress goes unmanaged for too long, it can lead to burnout, which is characterized by physical, emotional and mental exhaustion caused by pushing through emotionally demanding work or personal situations (Barghiel, 2024; Hricova et al., 2020)

Burnout rates are on the rise in Canada (Narrative Research, 2023; Statistics Canada, 2023). Many personal and professional factors increase the risk of burnout but helping professionals are particularly vulnerable because they are often emotionally invested in the work and are not just working to be paid (Hricova et al., 2020). There has been significant research in personal and environmental factors that increase risk for burnout, and which factors decrease stress and protect individuals from experiencing this common mental health crisis (Butler et al., 2017; Gómez-Borges et al., 2022; Hricova et al., 2020; Iancu et al., 2017; Yusufov et al., 2019)

In this paper, I will explore the question: How can self-care interventions help mitigate stress and prevent burnout in high-risk populations. My literature review will explore the relationship between stress and burnout, the populations and risk factors that predispose individuals to burnout, and the many self-care behaviours that can be used to buffer the impact of highly stressful work and support individuals in managing their stress and overall psychological health.

Method

In this literature review, I used a structured search strategy to identify academic sources related to stress, burnout, and self-care. My goal was to synthesize current knowledge about how self-care can buffer the effects of stress and prevent burnout, especially in high-risk populations.

I conducted most of my search through the City University of Seattle library database and limited my selection to peer-reviewed, academic sources available in English and published within the last five years to ensure scholarly rigor. I also included a small number of non-academic sources to provide context on statistical prevalence and ethical considerations.

I used combinations of search terms, such as “stress and self-care”, “self-care meta-analysis”, “burnout prevention meta-analysis”, “stress reduction interventions”, “exercise and psychological self-care”, and “exercise and stress management.” When my focus was on the physiological aspects of stress, I used terms like “biology of stress” and sourced primarily from biological or health science databases. Inclusion criteria were 1) peer-reviewed journal articles, 2) published between 2012-2024, 3) English language, 4) directly focused on stress, burnout, or self-care strategies in specific populations. Excluded were opinion pieces, and studies without clear outcome measures.

After identifying 20 core sources through my initial searches, I reviewed each article and took notes on content related to my thesis. I organized these notes thematically, based on the structure of my paper. In addition, I maintained a spreadsheet to compare each source by population studied, type of self care strategy assessed, the study’s key findings, and implications for practice. This created a comprehensive synthesis of trends across studies and allowed for cross-comparison.

As I wrote, if claims or themes from my own academic and professional experience emerged, I conducted additional targeted searches to find academic sources to support and contextualize these ideas. In total, I reviewed 37 sources, most of which were academic literature with a limited number of reputable non-academic sources for supplementary purposes.

Literature Review

Theoretical Framework

This paper is grounded in Lazarus and Folkman's (1984) *Stress and Coping Theory* which posits that stress comes from an imbalance between demands and resources and that psychological outcomes depend on an individual's cognitive appraisals and coping strategies. Lazarus and Folkman define *coping* as an individual's conscious effort to regulate stressors by using personal, social, and environmental resources (Iwanaga et al., 2024). *Appraisals* are an individual's interpretation of a stressor, whether it is seen as a challenge or a threat, and how the individual anticipates the impact of the stressor to their health and wellbeing (Iwanaga et al., 2024). Lazarus and Folkman's (1984) framework is specifically relevant to understanding how self-care acts as a coping mechanism in high-risk populations and offers a structure to analyze how individuals assess their stress and choose strategies to manage it. This framework provides a useful lens for evaluating the research reviewed in the following sections, particularly in understanding how appraisal and coping processes manifest across populations.

Biology and Psychology of Stress

The brain and body do not function in isolation. Newer research is no longer viewing biological and psychological systems as separate entities, but two dimensions of a human body that is a structured and interconnected unit (Bottaccioli et al., 2021). When an acute stress occurs, the hypothalamic-pituitary-adrenal (HPA) axis is activated prompting the release of

corticotropin-releasing hormone (CRH) from the hypothalamus (Herman et al., 2020; Lei et al., 2025). This stimulates the pituitary gland to release adrenocorticotrophic hormone (ACTH) which in turn, triggers the adrenal cortex release glucocorticoids, including cortisol (Bottaccioli et al., 2021; Herman et al., 2020; Lei et al., 2025). In parallel, the sympathetic-adreno-medullar (SAM) axis activates the adrenal medulla to secrete epinephrine and norepinephrine leading to increased cardiovascular activity, blood flow, and cognitive arousal, commonly known as the *fight or flight* response (Chu et al., 2024; Lei et al., 2025). While this response is adaptive in the short term, prolonged activation leads to chronic stress (Herman et al., 2020; Lei et al., 2025). When the stress response does not recover, and cortisol remains elevated, the immune, endocrine, and metabolic systems become dysregulated, increasing risk for hypertension, obesity, chronic pain, cardiovascular risk, diseases, and mental health disorders like depression and anxiety (Bottaccioli et al., 2021; Elliott et al., 2021; Fan & Baharum, 2024; Herman et al., 2020; Lei et al., 2025; Salgado-Pascual et al., 2020; Yusufov et al., 2019).

Chronic stress is not simply an accumulation of acute stressors, but a restructuring of how the body copes with stress (Herman et al., 2020; Lei et al., 2025). Typically, 60 to 80 minutes after exposure to a stressful incident, a threshold level of cortisol is reached, and a negative feedback mechanism inhibits further production of CRH and ACTH (Lei et al., 2025). However, chronic stress inhibits this recovery process, leading to abnormal levels of activity in glucocorticoid receptors, higher levels of cortisol, and an HPA axis that is dysregulated (Lei et al., 2025).

Some common coping strategies include increasing caffeine consumption, overeating, or taking sedatives to support relaxation, exacerbating stress responses and creating new problems, such as chemical dependency or health issues (Fan & Baharum, 2024). While the biological

processes of stress are well established, fewer studies examine how individual differences in cognitive appraisal or access to self-care resources affect biological outcomes. This gap limits our understanding of how psychosocial interventions might influence stress regulation at a physiological level. However, when psychological or mind-body interventions are effective, mental states and mood can improve, but so can biology, via recovery, immunity balance, and changes in epigenetic signatures (Bottaccioli et al., 2021).

The Relationship Between Stress and Burnout

Burnout is described as physical, emotional, and mental exhaustion that occurs when an individual pushes themselves through emotionally demanding work (Hricova et al., 2020). It is not a disorder defined in the American Psychiatric Association's (APA; 2022) *Diagnostic and Statistical Manual of Mental Disorders* (5th edition, text revision; DSM-5-TR), but both a process and a state of being (Hricova et al., 2020). The process begins as an increase in stress and the inability to cope with the demands (Hricova et al., 2020). Burnout is more severe than chronic stress on the spectrum of psychological well-being and includes environmental and personal triggers (Hricova et al., 2020; Küppers et al., 2024).

The tripartite system of burnout syndrome includes three components: emotional exhaustion, a reduced sense of personal accomplishment, and depersonalization (Hricova et al., 2020; Küppers et al., 2024). Depersonalization, in the context of burnout, occurs when an individual lacks empathy or adopts a cynical and negative attitude towards the people they are caring for (Kok et al., 2023). This is a detachment from others rather than a detachment of self characterized by clinical psychiatry's depersonalization/derealization disorder in the *DSM-5-TR* (APA, 2022). Understanding these components becomes even more important when considered alongside the biological mechanisms of chronic stress.

Chronic exposure to stressful environments is associated with higher rates of depression and anxiety, mirroring the effects of prolonged HPA axis activation and dysregulated limbic-prefrontal circuits (Iqbal et al., 2023; Ireland et al., 2022). An impaired prefrontal cortex is correlated with poor emotional regulation and executive dysfunction, and limbic system activation can create emotional volatility and emotional numbness, all of which correlate with reduced accomplishment, depersonalization, and emotional exhaustion (Iqbal et al., 2023).

Burnout is related to, but also distinct from both compassion fatigue and vicarious trauma, however all three can be occupational hazards with negative emotional outcomes (Pirelli et al., 2020). Individuals who work in a caregiving profession are required to draw on higher levels of empathy and compassion and when these expressions are regularly toward other individuals' feelings of fear, hurt, or anger, empathy can deplete, which is commonly referred to as compassion fatigue (Pirelli et al., 2020).

Vicarious trauma occurs when individuals are exposed to the retelling of a traumatic event, which can affect the individual's worldview, belief system, emotional needs, and cognitions. Symptoms can mirror those of a direct trauma exposure (Pirelli et al., 2020). Although compassion fatigue and vicarious trauma do not always accompany burnout, all three conditions illustrate how chronic stress can manifest differently across caregiving professions and can compound in certain populations, increasing their risk (Pirelli et al., 2020).

Despite strong evidence linking chronic stress to burnout, the literature varies in how it defines and measures burnout, particularly in distinguishing it from compassion fatigue and vicarious trauma. Greater standardization and conceptual clarity would enhance the development of targeted interventions. Burnout is a biopsychosocial outcome, where sustained biological dysregulation interacts with personal and environmental stressors.

Biopsychological Mechanisms of Stress

In addition to environmental and personal influences, biological mechanisms play a critical role in shaping how stress is experienced. For much of history, the social and biological models of disease have been oppositional (Bottaccioli et al., 2021). The biomedical paradigm that has permeated our culture divided the mind and society from the body and biology, however through brain imaging, we have learned that psychological interventions do affect the functions of the brain and changes occur to anatomical structures of brain circuits (Bottaccioli et al., 2021). Human biology and mental activity are not two separate sides of a coin but are in fact modulated by each other (Bottaccioli et al., 2021).

The study of epigenetics has found that body-mind interventions can change the way genes express themselves in an individual's brain receptors and neurotransmitters, providing an explanation for how to treat psychological disorders by better understanding the mechanisms of action involved (Bottaccioli et al., 2021). Prolonged stress can change gene expression in glucocorticoid receptors, influencing baseline cortisol levels (Bottaccioli et al., 2021). Nutrition and physical activity have also demonstrated influence over emotional wellbeing, epigenetics, and the brain's neuroplasticity (Bottaccioli et al., 2021).

Psychoneuroendocrineimmunology (PNEI) is a newer single model of understanding that accumulates knowledge from psychology, neuroscience, endocrinology, and immunology to create a model of health and disease that sees the mind and body as a complex interconnected unit where biological and psychological systems are mutually coordinated (Bottaccioli et al., 2021). Similarly, immunopsychiatry is an emerging research area that is studying the relationship between mental health and inflammation, with evidence that chronic stress is driving inflammation and elevating risk for mental health disorders. As a result, treatment approaches

targeting inflammation are also being explored (Bottaccioli et al., 2021). The risk of burnout is especially high in certain populations, which I will cover in the next section.

Populations at Risk for Stress and Burnout

Research on stress and burnout has focused on a variety of at-risk populations, including teachers (Iancu et al., 2017), parents (Brandão et al., 2024; Burgdorf et al., 2019), college students (Amanvermez et al., 2023; Elliott et al., 2021), graduate students (Geary et al., 2023; Myers et al., 2012; Yusufov et al., 2019), healthcare and psychology students (Lu et al., 2023), and healthcare professionals who also experience secondary trauma (Butler et al., 2017).

Individuals who hold marginalized identities experience more stress than their more privileged counterparts (Elliott et al., 2021). Those who are members of cultural minority groups experience more discrimination, underappreciation, and underrepresentation, which can have negative impacts on mental health (Elliott et al., 2021). To fully understand the varying impact of stress across diverse populations, further research is needed with the intention of including and investigating data on intersecting identities such as race, gender, socioeconomic status, sexual orientation, and disability. It is important to acknowledge that cultural factors shape individuals' lived experiences in complex ways.

When it comes to disparities between men and women, the average woman experiences more perceived stress and greater negative impact by stressors, and it is suggested that the female hormonal and immune systems react differently to stress than the male systems (Elliott et al., 2021). Men and women also tend to have different coping skills: women tend to prefer avoidant or emotional tactics, whereas men choose more rational and detachment strategies (Elliott et al., 2021). These different strategies likely impact cortisol regulation and recovery (Zorn et al., 2017). Regardless of which strategy is used, coping behaviours do reduce the risks of negative

physical and mental health consequences and can promote ongoing psychological health (Elliott et al., 2021).

Socioeconomically, financial constraints can add significant stress in an individual's life, which leads married students, older students, and those with lower costs of living to be less stressed (Myers et al., 2012). Having a job can increase stress since the demands deplete energy and can lead to exhaustion or other health problems, especially when an individual must work with fewer resources (Hricova et al., 2020). However, if there are ample resources, stress is reduced and job satisfaction increases (Hricova et al., 2020).

For parents, burnout risk is increased by the number of children, their ages, and parents' employment and sociodemographic statuses (Brandão et al., 2024). Psychosocial factors such as parents' personality and ability to regulate emotions, or the temperament or special needs of their children have a strong influence on the way families are impacted by stress (Brandão et al., 2024). The family's child-rearing practices, co-parenting relationships, social support levels, and time for leisure and rest also play a significant role in how families cope (Brandão et al., 2024). Early life stressors in childhood can be used to predict the likelihood of mental health disorders in adulthood (Elliott et al., 2021). It is also becoming more common for young people today to self-report poor emotional health than in the previous 25 years (Yusufov et al., 2019).

Professionally, psychologists, and other HCPs, have high levels of stress and psychological distress that predisposes them to burnout (Coleman et al., 2016). Novice members of the profession are at a higher risk than senior practitioners, and although personal characteristics, such as race or gender, did not make much difference within the profession, those with more self-compassion had a tendency to cope better than those with less (Coleman et al., 2016).

In addition, those who experience marginalization are at an increased risk for psychological distress (Elliott et al., 2021). This trajectory is in line with Lazarus and Folkman's (1984) model, in which sustained exposure to stressors, paired with insufficient coping resources, leads to maladaptive outcomes (Iwanaga et al., 2024).

These groups experience stress because of situational demands, such as workload, caregiving, and exposure to trauma, but their intersecting identities, such as race, gender, and socioeconomic status, also shape their vulnerability to chronic stress and burnout (Butler et al., 2017; Elliott et al., 2021; Pirelli et al., 2020; Statistics Canada, 2023). According to the stress-appraisal-coping framework, these groups are especially vulnerable because their lived experiences shape their appraisals of stress and their perceived access to coping resources (Iwanaga et al., 2024). While the sources of their stress differ across populations, the outcomes often converge in symptoms of emotional exhaustion, depersonalization, and a reduced sense of accomplishment. However, much of the existing research disproportionately focuses on college students and healthcare professionals in Western contexts, with limited attention to intersectional identities or underrepresented groups. Future studies should include more diverse and global populations to fully capture the complexity of stress and burnout across cultural and systemic lines.

Teachers and Parents

Teacher burnout is common due to lack of resources in school systems, particularly in handling emotional events (Iancu et al., 2017). Their socio-emotional responsibility for a high number of students is unique to their profession, and they make hundreds of in the moment decisions every day about how to best support the students in their care (Iancu et al., 2017). This

constant demand on emotional regulation and executive functioning taxes the prefrontal cortex, contributing to emotional and mental exhaustion, core features of burnout (Bottaccioli et al., 2021; Lei et al., 2025; Iancu et al., 2017). Schools, teachers, and students experience serious consequences because of teacher burnout, which can be observed as detachment, strong feelings of professional inadequacy, and the development of cynical attitudes towards the work, which makes it difficult for students to get their emotional, mental, and academic needs met (Iancu et al., 2017). In order to be successful in school, students need to feel safe and connected, regulated and confident, and have adequate instruction and support, all needs that a teacher is expected to meet.

Parents can also experience significant pressure to meet the needs of their children, however parental burnout happens after prolonged exposure to chronic and overwhelming stress (Brandão et al., 2024). Parenting stress is normal, but when a parent's level of stress leads to physical and emotional exhaustion, an increase in emotional distance from children, or a reduction in their sense of parental accomplishment and efficacy, it is likely that burnout is occurring and can lead to negative outcomes for parents and their children (Brandão et al., 2024; Burgdorf et al., 2019).

Parents of children who struggle to meet behavioural expectations, such as those with attention-deficit hyperactivity disorder (ADHD), are forced to respond to excessive demands and overlapping tasks (Salgado-Pascual et al., 2020). They are often coping with internal and external crises and must respond to the relational conflicts with their children and others (Salgado-Pascual et al., 2020). These parents can experience internalized and externalized pressures and are often living with uncertainty about their own ability and their child's ability to be successful (Salgado-Pascual et al., 2020).

Parents who report high parenting stress also report more interpersonal and social difficulties, lower marital quality, more negative affect and less positive affect, poorer cognitive skills, more executive dysfunction, and their children have more internalizing and externalizing problems (Burgdorf et al., 2019). Parental burnout is experienced by 5-9% of parents in western countries and is linked to psychosocial problems such as: relationship difficulties and increased conflict in romantic relationships, family escape ideations, alcohol abuse, suicidality, and engagement in child abuse or neglect (Brandão et al., 2024).

Both teachers and parents demonstrate how sustained emotional labour, decision-making overload, and chronic caregiving stress can manifest in burnout, with consequences that also impact the wellbeing of the children and students in their care (Brandão et al., 2024; Burgdorf et al., 2019; Iancu et al., 2017). Similar patterns of chronic stress and burnout can be seen in student populations, particularly those in college and graduate level education.

College Students

According to Amanvermez and colleagues (2023), 20-45% of college students experience a mental health disorder every year. It is becoming more common for young adult students to self-report poor emotional health, and this generation appears to be struggling more than previous generations (Yusufov et al., 2019). The COVID-19 pandemic increased psychological distress, but college-age individuals are more likely to experience daily life stressors than other age groups due to the transitional nature of this time (Dawson et al., 2020; Elliott et al., 2021).

College-age students are often leaving home for the first time, experiencing loneliness, making new friends, continuing to develop their own personal identities, are worried about their academic performance, and have a unique pressure to succeed (Dawson et al., 2020; Elliott et al., 2021). Other reported stressors include personal problems, economic concerns, career issues,

dropout rates, physical illness, onset of mental health disorders, and suicide ideation or behaviours (Amanvermez et al., 2023). Despite all of this, not a lot of students reach out for support because of stigmatization, lack of time, cultural values, negative attitudes about possible outcomes, perception of need, and a preference to self-manage, even though the transition could be an ideal time to introduce new healthy habits (Amanvermez et al., 2023; Elliott et al., 2021). While many studies emphasize individual coping behaviours, there is limited discussion on institutional or structural contributors to student stress. This may result in an overemphasis on personal responsibility and underemphasis on systemic changes.

Even prior to the COVID-19 pandemic, it was reported that distress in college age students was becoming more prevalent, as self-reports on emotional health were demonstrating a decline over the past 25 years (Yusufov et al., 2019). Combined with the fact that many psychological disorders onset at this age, all these unique psychological stressors increase college students' risk of mental and physical health problems (Elliott et al., 2021). Unhealthy eating, poor sleep hygiene, less frequent exercise, and more maladaptive coping strategies are prevalent in this population which increase risk (Myers et al., 2012).

Students in Healthcare Fields

The stressors of college age students are amplified in programs for helping professionals, such as psychology, social work, nursing, and medical students (Geary et al., 2023; Lu et al., 2023; Myers et al., 2012; Yusufov et al., 2019). Medical students were among the first to be studied, but later studies found that medical and psychology students were among those who had the highest levels of stress (along with law students) compared to other disciplines, especially in graduate school, due to the intensity of their academic schedules, their research expectations, sleep deprivation, intense clinical training, competition among peers, interpersonal and

professional relationships, and performance anxiety in high stakes residencies, which increases their risk of burnout, mental health disorders, and suicidality (Lu et al., 2023; Myers et al., 2012).

Students in the healthcare field must balance the expectations of theoretical learning with the responsibility of being a caregiver, practicing with a lack of knowledge, and experiencing a stressful and novel environment, increasing the risk for perceived stress, anxiety, and depression (Yusufov et al., 2019). At least 70% of psychology doctoral students experienced a stressor that impacted their functioning, as they are at a greater risk for physical and mental health symptoms than the general public (Geary et al, 2023) and 35-65% of student nurses, physicians, and pharmacists demonstrated high levels of stress and significant signs of burnout (Lu et al., 2023).

Female students and ethnic minorities experience unique stressors including discrimination, prejudice, feelings of isolation and the navigation of different cultural expectations, further increasing their levels of stress (Myers et al., 2012). Unfortunately, higher rates of depression, burnout, and reduced quality of life were reported by minority students, along with an increase in academic barriers and a decrease in likelihood to reach out for counselling services (Myers et al., 2012).

Secondary or vicarious trauma can also occur for clinical students in fieldwork or during coursework, as both can be equally reactivating, although fieldwork stress had greater effects on health and higher burnout rates (Butler et al., 2017). The stress of trauma training compounded on the typical stress experienced by students in the healthcare field (Butler et al., 2017).

Students may experience fear, helplessness, and horror in response to secondary traumatic exposures or reactivation of their own historic trauma during coursework or fieldwork (Butler et al., 2017). Research demonstrated that students experience more symptoms of trauma than seasoned professionals (Butler et al., 2017).

Health Care Professionals

After graduation, Healthcare professionals (HCPs) work in complex environments where they are expected to be compassionate and sensitive while making high-risk decisions in complex situations (Butler et al., 2017). The high levels of stress experienced in graduate school extends into their careers, lowering professional performance, decreasing empathy, and straining relationships with patients (Lu et al., 2023). The nature of being a helping professional inherently carries risk that needs to be mitigated (Rupert & Dorociak, 2019).

Healthcare professionals often work long hours and have high burnout rates, given their risk for emotional exhaustion and the impact their stress levels have on quality of care to their patients (Butler et al., 2017). Increases in stress can lead to a higher number of clinical errors, impact in the ability to empathize, and subsequently patient satisfaction decreases and patient recovery time increases (Butler et al., 2017).

It is estimated that a third of HCP absences are due to stress and two thirds of physicians experience burnout in their career, and they often seek early retirement because of the impact of work-related stress to their relationships, emotional wellbeing, and physical health (Butler et al., 2017).

Healthcare professionals are frequently exposed to others' trauma which increases the risk for vicarious trauma (Butler et al., 2017). This is a possibility in any helping profession, especially when an individual is trying to be empathetic but the more an individual is exposed to others' trauma, the more likely they are to experience vicarious trauma (Butler et al., 2017). The risk increased for those with high caseloads, limited supervision, less experience, or more challenging client populations (Butler et al., 2017).

Across both healthcare students and professionals, burnout and vicarious trauma demonstrate how occupational demands interact with environmental stressors and personal vulnerabilities. The next section explores these factors more broadly.

at risk)

The Importance of Self-Care

Over the past decade, research has highlighted the role of nutrition in mental health through mechanisms such as inflammation, oxidative stress, and the gut-brain axis since the stress hormone cortisol affects the gut, and anti-inflammatory diets can benefit a person's mental health (Bottaccioli et al., 2021). Some *ifidobacterium longum*-based probiotics can reduce anxiety and cortisol, and we know that fish oils, zinc, and vitamin D are good for the brain, but nutrition is not the only way that we can take care of ourselves.

Physical activity also positively impacts epigenetics and neuroplasticity (Bottaccioli et al., 2021). In fact, regular exercise reduces stress hormones, increases brain temperature, which promotes relaxation and has an antidepressant effect, and positively influences neurotransmitters like serotonin, dopamine, and norepinephrine (Bottaccioli et al., 2021). These physical and mental health benefits are why physical activity is critical to self-care.

Self-care is any behaviour or activity that promotes health and wellbeing, that is intentionally done to make oneself feel better physically, mentally, or emotionally (Coleman et al., 2016; Gómez-Borges et al., 2022; Myers et al., 2012; Rupert & Dorociak, 2019). It is the go-to strategy to protect against stress and distress because it allows for balance between personal and professional demands and acts as a moderator to promote wellbeing and protect against a dangerous downward spiral of stress, chronic stress, and burnout (Geary et al., 2023; Hricova et

al., 2020; Rupert & Dorociak, 2019). Self-care does not just protect against negative outcomes but also promotes positive outcomes when it is done proactively, decreasing the experience of stress, and increasing awareness around signs of distress, so individuals know when to seek support (Geary et al., 2023; Rupert & Dorociak, 2019).

For healthcare professionals and other caregivers, self-care is not only a critical personal practice, but an ethical responsibility (Zahniser et al., 2017). The APA's *code of ethics* emphasizes the importance of recognizing and addressing personal issues that may interfere with competence, making it necessary for ethical practice (Myers et al., 2012; Zahniser et al., 2017).

Geary et al. (2023) proposed five domains of self-care, including physical, emotional, psychological, professional, and spiritual. Physical self-care includes healthy eating, physical exercise, and appropriate sleep hygiene (Geary et al., 2023). Emotional self-care might include connecting with others, laughing, and self-praise, whereas psychological self-care might include actions that enhance self-awareness and making healthy decisions, such as journaling, going to therapy, or reading (Geary et al., 2023). Professional self-care would include behaviours that support professional health and competence, such as attending training, establishing healthy boundaries, seeking supervision or support, and advocating for resources and meeting professional needs (Geary et al., 2023). Lastly, spiritual self-care can include meaningful religious or spiritual activities that allow for connection and enhance wellbeing (Geary et al., 2023).

The self-care assessment and practice (SCAP) tool assessed these domains across five categories: professional support, professional development, life balance, cognitive awareness, and daily balance (Dorociak et al., 2017). High scores across all domains are associated with lower burnout rates, less perceived stress, better mood, greater life satisfaction, and overall

wellbeing (Zahniser et al., 2017). Together, Geary et al.'s (2023) proposed domains and the SCAP framework highlight self-care as a multidimensional process that includes relational, psychological, and biological strategies.

Whether the method of self-care is healthy eating, physical exercise, mindfulness, leisure activities, hobbies, proper sleep, or adaptive coping strategies, the research demonstrates an association between self-care and more positive outcomes (Geary et al., 2023; Gómez-Borges et al., 2022; Zahniser et al., 2017). Regardless of the population that was studied or the chosen method of self-care, the act of engaging with purpose and effort in specific behaviours to maintain wellness was beneficial in reducing stress and negative outcomes (Coleman et al., 2016). Learning how to significantly implement self-care strategies is a critical skill for managing stress, and it can be implemented on both a personal and systemic level (Coleman et al., 2016; Lu et al., 2023).

While self-care is generally considered at an individual level, systemic and organizational context plays a critical role in shaping stress and wellbeing. Systemically, workplaces and learning institutions can manage factors such as competitiveness within the environment, workload expectations, regularity of schedules, and required economic resources (Lu et al., 2023).

Within graduate programs, faculty members could incorporate the importance of self-care into lessons, model it, allow more breaks, emphasize learning over grades, respect email boundaries, check in with students, adjust syllabi, reduce unnecessary work, encourage time off, and host self-care events (Geary et al., 2023). Self-care training and practice should be a part of the curriculum for healthcare professionals and psychoeducation about compassion fatigue, vicarious trauma, and burnout can help students understand the importance of self-care (Butler et

al., 2017; Coleman et al., 2016). Learning how to reduce stress early in their careers can support HCP's long-term wellbeing and ensure more positive outcomes for their patients (Lu et al., 2023)

It is not always possible for workplaces to reduce stress in their employees; however, employers can help increase job satisfaction to help prevent emotional exhaustion and depersonalization (Hricova et al., 2020). Job satisfaction is typically determined by the nature of the work, the satisfaction with pay, and the operating conditions, and having more job satisfaction gives professionals more pride, joy, and allows them to persevere during stressful times (Hricova et al., 2020). Improving salaries, reducing workloads, and strengthening the relationships among and between teams can improve outcomes (Hricova et al., 2020).

In high stress environments, workplaces and learning institutions could implement medium to long-term interventions, such as social support and cognitive behaviour therapy strategies for managing stress, anxiety, and depression (Amanvermez et al., 2023; Iancu et al., 2017; Yusufov et al., 2019). These strategies, regardless of their length, were effective in reducing cortisol levels compared to control groups and had greater effects on those who considered themselves 'high stress,' and also reduced levels of anxiety and depression (Amanvermez et al., 2023).

Professional and psychological self-care behaviours had the greatest impact on preventing burnout (Hricova et al., 2020). Increasing job satisfaction decreases the level of emotional exhaustion and depersonalization experienced at work (Hricova et al., 2020). The happier someone is with their job, the less likely they are to experience burnout, but when job satisfaction is low and self-care behaviours are low, there is an increased risk of emotional exhaustion which is a factor in burnout (Hricova et al., 2020). When workplace stress is high, professional self-care increases depersonalization, a focus on co-worker relationships, and

employees' sense of accomplishment would be more effective in mediating stress (Hricova et al., 2020). Alongside systemic approaches, applying individual interventions is also essential for managing stress and preventing burnout.

Individuals can manage their expectations of themselves and their ability to cope with stress, which may include accessing resources, learning skills, or practicing specific behaviours to reduce stress (Lu et al., 2023). Some personal interventions include psychoeducation, cognitive behaviour therapy, coping skills training, mindfulness and relaxation training, and social support (Yusufov et al., 2019).

Self-care interventions can be appropriately tailored to each high-risk group depending on their needs. For example, health care practitioners should learn the importance of stress management early in their careers to promote long-term wellbeing and ethical care (Lu et al., 2023). Teachers could benefit from social support programs that include cognitive and mindfulness strategies to reduce emotional exhaustion and increase a sense of personal accomplishment (Iancu et al., 2017). Providing support to high-risk student groups, such as minority students or those in high stress programs, could improve student engagement and outcomes (Yusufov et al., 2019).

Psychoeducation can increase knowledge and understanding of factors that cause stress and the cognitive, emotional, behavioural, and physiological effects of stress (Yusufov et al., 2019). Relaxation training can include learning skills such as meditation, guided imagery, progressive muscles relaxation, and biofeedback strategies to reduce physiological stress response in the body (Yusufov et al., 2019). Cognitive behaviour therapy teaches strategies to better understand and modify maladaptive thought patterns, such as catastrophizing, that may lead to less healthy coping strategies, such as substance use (Yusufov et al., 2019). Coping skills

training would be tailored to an individual's specific needs and stressors, whereas mindfulness training could include specific interventions such as mindfulness-based stress reduction (MBSR) which teaches the skill of attending to one's present experience without judgement to reduce negative thoughts (Yusufov et al., 2019). Lastly, social support interventions include any opportunity to connect with others, share experiences, thoughts, and feelings, in a supportive environment (Yusufov et al., 2019).

The literature consistently demonstrates the value of self-care at both the individual and organizational level. Self-care is multidimensional, spanning physical activity and nutrition, to organizational structures, social support, and psychological practices. Yet not all self-care methods are equally effective for each individual.

Self-Care As Prevention

If stress is a continuum, through distress and eventual impairment, due to burnout, then the necessary intervention is self-care as a means of reducing stress (Rupert & Dorociak, 2019). However, self-care must be preventative and ongoing and not just a too-little-too-late treatment when burnout occurs (Rupert & Dorociak, 2019). Within Lazarus and Folkman's (1984) framework, preventative self-care is a proactive strategy that increases coping and reduces perceived stress. Students reported that the more stress they experienced, the less they flourished and when their environment cultivated a culture of self-care, more people participated and experienced the benefits (Zahniser et al., 2017).

It is not simply the act of self-care, but the intention of non-judgement, kindness, and compassion toward oneself while engaging in self-care that moderates the relationship with perceived stress and life satisfaction (Geary et al., 2023). In fact, self-compassion increased both physical and mental health outcomes in Geary et al.'s (2023) study.

Coleman et al. (2016) compared psychology graduate students who engaged in self-care to those who did not and found that 80% of those who did engage experienced the greatest benefit in their self-compassion, their reduced levels of psychological distress, and an increase in satisfaction with their graduate program and their life. Although gains in their stress levels were minimal, Coleman et al. concluded that self-care may have been better at changing their outlooks rather than changing the actual situation (2016). Butler et al. (2017) also found that lower rates of self-care were linked to higher levels of burnout, vicarious trauma, and more health problems, whereas higher self-care rates buffered compassion satisfaction and decreased odds of health problems. Given all the benefits, the next section explores which self-care interventions are the most effective in reducing stress and preventing burnout.

Comparisons of Self-Care Interventions: What Works Best?

At the core of this research is the theme that there is no one-size-fits-all intervention that works for every individual. Yusufov et al. (2019) conducted a meta-analysis on undergraduate and graduate students and compared interventions targeting the reduction of anxiety and perceived stress. What they found was that all interventions were effective in different ways, though relaxation training had the greatest impact on reducing anxiety when it was applied for a longer duration of time (Yusufov et al., 2019). Coleman et al.'s (2016) meta-analysis on psychology graduate students shared similar findings: the specific interventions did not matter; there is no universal answer. Effective self-care strategies will vary across individuals, depending on their preferences, accessibility, and stage of life (Rupert & Dorociak, 2019). While these meta-analyses suggest broad effectiveness in all interventions, some specific self-care methods have been studied with more depth.

Exercise

Physical activity is known to have physical benefits such as the reduced risk of cardiovascular disease, type two diabetes, weight management, and stronger muscles and bones (Elliott et al., 2021; Gómez-Borges et al., 2022; Myers et al., 2012). Biologically, exercise improves glucose metabolism, which may also have psychological benefits (Bottaccioli et al., 2021). Regular exercise reduces stress hormones, prevents stress-induced suppression of the immune system and is often a primary intervention when treating ADHD, depression, anxiety, and substance use disorders (Bottaccioli et al., 2021; Myers et al., 2012).

In Myers et al.'s early study (2012) on psychology students, those who exercised regularly were less likely to experience stress, including academic stress, and had less stress-related impacts to their physical health. However, some students found that exercise actually increased their stress, especially during times of academic pressure. If motivation to exercise comes from harmful self-image, then exercise was found to decrease wellness rather than increase it (Bottaccioli et al., 2021).

Elliott et al. (2021) noted some gender differences in how men and women experienced exercise as stress reduction. Women specifically were more likely to report lower levels of perceived stress, whereas men experienced less of an impact (Elliott et al., 2021). One theory is that exercise may have different physiological and biological effects on different hormonal systems (Elliott et al., 2021). Vigorous physical activity was also found to have a stronger correlation with well-being and was especially effective at improving mood after a difficult day of work (Elliott et al., 2021; Gómez-Borges et al., 2022).

Physical activity has the added benefit of being integrated with other self-care interventions such as mindfulness, social support, and time outside, which could potentially compound its effectiveness.

Nature Exposure

During the COVID-19 pandemic, Fan and Baharum (2024) studied how access to green spaces, parks, and indoor plants reduced stress. They proposed two theories for why nature reduces stress. Biophilia is the idea that humans have an innate affinity for nature, and restorative environment theory posits that nature provides us with opportunities for cognitive and emotional restoration (Fan & Baharum, 2024).

As beneficial as nature can be, not all people have access to green spaces, but most people have access to digital nature and evidence suggests that even digital nature exposure can reduce stress, improve vitality, increase motivation, improve cognitive functioning, and elevate physiological arousal (Fan & Baharum, 2024). Digital nature can be auditory and visual, though it is less of a sensory experience than actual nature, because it lacks the multisensory and often tactile experience. Virtual reality that offers a more immersive three-dimensional experience is more likely to reduce stress than a two-dimensional experience (Fan & Baharum, 2024). Lahart et al. (2019) compared exercising outside to inside with a digital outdoor experience and found no difference in participants' energy levels, tension, fatigue, sense of calm, attention, or heart rate, although more participants reported enjoying the real outdoor experience more (as cited in Fan & Baharum et al., 2024). Despite its novelty in the research, digital nature could be a cost-effective way to reduce stress if access to true natural spaces is limited.

Social Support

Just as social environments can shape stress, social supports have consistently been highlighted as a protective self-care practice (Iancu et al., 2017; Myers et al., 2012; Yusufov et al., 2019). Myers et al. (2012) defined social support as the engagement in activities that promoted social support, whether it was from friends, family, peer groups, or professionals. In Myers et al.'s study, more social support was correlated with significantly less stress, and less anxiety for female students (2012). Graduate students who reported a need for social support also experienced high stress, and the more support students received from their family members or academic counsellors, the more it lowered stress (Myers et al., 2012). Students who received social support interventions reduced their feelings of perceived stress and increased their sense of belonging and personal accomplishment (Iancu et al., 2017; Myers et al., 2012; Yusufov et al., 2019). Relational strategies and social connection offer an accessible way to reduce stress and prevent burnout.

Mindfulness and Meditation

Mindfulness is one of the most accessible stress management strategies and is arguably one of the most important self-care activities (Gómez-Borges et al., 2022). It can be defined as paying attention to the present moment without judgement (Burgdorf et al., 2019; Butler et al., 2016; Myers et al., 2012). Attention can be drawn in a particular way, with purpose, to thoughts, feelings, or somatic sensations (Butler et al., 2016; Dawson et al., 2022).

A mindfulness practice enhances awareness, regulates attention, and allows for acceptance of thoughts, feelings, and states of being without the need to change them (Butler et al., 2016). This practice can interrupt automatic cognitive processes and produce changes in the structure and function of the brain regions responsible for attention, sensory awareness, self-

awareness, and emotional regulation (Dawson et al., 2020; Lu et al., 2025). Salgado-Pascual et al., (2020) described two types of mindfulness exercises. The first is focused attention, where an individual explicitly focuses on their breath, sensory sensations, or a mantra, which increases focus and attention control. The second is an open monitoring, where an individual attends to whatever thoughts or feelings arise, and acknowledges them without judgement, which can increase the sense of acceptance (Salgado-Pascual et al., 2020).

Regardless of how an individual chooses to practice mindfulness, it can reduce emotional distress, anxiety, hostility, depression, and increase positive wellbeing (Myers et al., 2012). The practice allows individuals to develop awareness of their stressful triggers and accompanying body sensations, gives opportunities to practice coping strategies like deep breathing, escaping rumination, and giving themselves compassion (Iancu et al., 2017). Parents who are more mindful tend to have more success reducing their automatic responses to their children's difficult behaviours, such as responding to tantrums with anger (Burgdorf et al., 2019). Having a mindfulness practice can reduce feelings of emotional exhaustion and increase feelings of personal accomplishment, directly improving burnout symptoms (Iancu et al., 2017).

Employees who participated in mindfulness programs improved their job satisfaction, work engagement, performance, and grew in happiness (Gómez-Borges et al., 2022). Programs that focused on self-compassion and life satisfaction yielded better results than those who focused solely on reducing stress (Gómez-Borges et al., 2022).

Dawson et al. (2020) conducted a meta-analysis of 57 studies that used mindfulness-based interventions and found that stress was reduced in 95% of scenarios compared to their control groups and improved symptoms of distress, anxiety, depression, and rumination. They

found that the duration of the interventions and whether they were in-person or virtual did not impact the results (Dawson et al., 2020).

Mindfulness-based stress reduction (MBSR) is a specific program designed to improve relaxation and decrease stress using mindfulness, which has been studied and adapted for multiple research experiments (Dawson et al., 2020; Burgdorf et al., 2019; Lu et al., 2023; Myers et al., 2012; Salgado-Pascual et al., 2020; Yusufov et al., 2019). MBSR programs can last between 8-15 weeks, depending on the study and have been found to be effective in reducing stress, anxiety, and depression symptoms, and improve self-compassion (Lu et al., 2023; Myers et al., 2012; Salgado-Pascual et al., 2020). It was noted, however, that mandatory participation in MBSR yielded no benefits, whereas acceptance and satisfaction were reported in non-mandatory programs (Lu et al., 2023). Even children reported cognitive and social improvement when their parents attended an MBSR parenting group (Burgdorf et al., 2019).

Some of the studies showed nuance in the findings. Myers et al. (2012) found that frequency of mindfulness engagement did not lower stress, but practicing mindful acceptance did. Dawson et al.'s (2020) meta-analysis found that the practice sometimes increased mindfulness as a personality trait, and other times it didn't, as well as some studies reported inconsistent self-compassion findings, and more or less of an increase in positive wellbeing. These inconsistencies suggest that mindfulness-based interventions may not be universally effective and that individual differences, such as readiness to change or baseline distress, should be more closely examined in future research.

Despite some individual differences, mindfulness is a practical regulation skill that can be paired with other self-care activities, especially physical activity, to improve wellbeing. Mind-body practices, such as yoga, tai chi, and qi gong join the practice of mindfulness with physical

activity. These practices have demonstrated success in reducing cortisol and inflammation in the body via biological markers, signifying their value in reducing stress (Bottaccioli et al., 2021). Cognitive behaviour therapy (CBT) and other cognitive strategies have also been shown to reduce inflammation and stress (Bottaccioli et al., 2021).

Cognitive and Emotional Strategies

CBT is a psychotherapy practice that explicitly works with psychoeducation and interventions that target the individual's thought patterns to improve their emotional wellbeing (Brandão et al., 2024; Iancu et al., 2017; Myers et al., 2012; Yusufov et al., 2019). Cognitive appraisal, the practice of interpreting a situation in a more helpful way, had a greater impact on reducing perceived stress compared to anxiety (Myers et al., 2012; Yusufov et al., 2019). This strategy lowers stress by changing the meaning of an emotion-invoking stimulus and assisting in emotional regulation (Brandão et al., 2024; Myers et al., 2012). This is a direct alignment of Lazarus and Folkman's (1984) concept of cognitive reappraisal as a primary coping mechanism. Individuals who use this strategy tend to report fewer negative emotions, more positive emotions, better interpersonal functioning, and more life satisfaction (Yusufov et al., 2019).

There is a significant relationship between emotional regulation and mental health, as difficulties with this skill is a risk factor for psychopathology (Brandão et al., 2024). Emotional regulation is a skill that is both conscious and unconscious, intrinsic and extrinsic, meaning that there is a wide range of ability for individuals to manage their own and others' emotions (Brandão et al., 2024). When there is a discrepancy for how an individual feels and how they wish to feel, they can try cognitive reappraisal or emotional suppression to help themselves feel better (Brandão et al., 2024). Although emotional suppression is beneficial in the short-term, it has long term consequences, such as lower relationship satisfaction, disruptive communication,

and increased stress levels (Brandão et al., 2024; Myers et al., 2012). Both cognitive appraisal and emotional regulation are skills that can increase an individual's self-compassion.

Self-compassion is the ability to offer oneself kindness, and non-judgemental acceptance in response to difficulties (Han & Kim, 2023). One could argue that engaging in any kind of self-care practice could be an act of self-compassion, as it includes self-kindness, common humanity, and mindfulness to buffer symptoms of anxiety, depression, and stress (Han & Kim, 2023). Some specific interventions in Han & Kim's (2023) meta-analyses on the effects of self-compassion include mindfulness practices, visualizations, guided meditations, psychoeducation around self-compassion, and self-compassionate letter writing (Han & Kim, 2023).

Han & Kim's (2023) research found that these interventions helped to alleviate individuals' suffering by encouraging self-kindness, non-judgement of one's suffering, and accepting that suffering is a part of the human experience. Han & Kim found that these brief and easy practices strengthened motivation for self-care and lowered symptoms for depression, anxiety, and stress (2023).

Despite promising results, many of the cognitive and emotional strategies reviewed were studied in student populations, limiting generalizability to older adults or long-term caregivers. More comparative research is needed across the lifespan and profession. Regardless of the method of self-care being studied, researchers found variance across populations (Yusufov et al., 2019). Women, for example, experienced stronger effects from psychoeducation and social groups, but ethnicity, race, and cultural groups might also impact the efficacy of findings (Yusufov et al., 2019). Students may differ from parents or professionals because of their different phases of life, stressors, and accessibility to self-care activities (Yusufov et al., 2019).

Regardless of the variability, it is important that individuals tailor stress reduction activities to meet their specific needs and institutions offer more support to prevent burnout.

Recommendations and Practical Implications

The responsibility of stress management and burnout prevention should not solely be the burden of the individual. Institutions and workplaces have the power and responsibility to create a culture that values self-care if they want to buffer the impacts of burnout.

Evidence-based strategies, such as mindfulness-based stress reduction (MBSR), which consistently showed benefits across populations (Dawson et al., 2020; Lu et al., 2023), could be integrated into clinical training programs for HCPs and educators. Cognitive-behavioural coping skills training was found effective in reducing distress in both college and graduate students (Yusufov et al., 2019) and should be adapted for campus-wide mental health programs. These interventions are not only evidence-based but scalable across settings.

In universities, graduate students reported the need for systemic instruction on the importance of self-care (Zahniser et al., 2017). This can be delivered through seminars, coursework, or workshops that include psychoeducation on stress, self-care training and practice, including the multiple types of self-care, and encouragement to integrate what works for them into their practice (Coleman et al., 2016). Self-care should be a core competency in psychology graduate programs that is actively encouraged and modelled by faculty (Myers et al., 2012; Zahniser et al., 2017).

College and university students across all disciplines could benefit from social support programs for stress-management, such as CBT groups for anxiety and depression, which can reduce stigma and offer benefits (Amanvermez et al., 2023). Mindfulness-based groups can be especially beneficial for HCP students as these skills reduce stress when learned early and

support long-term wellbeing, systemic changes, and benefits client outcomes (Lu et al., 2023). Teachers reported an increase in emotional exhaustion and a reduction in emotional exhaustion with the participation in social support CBT groups that lasted between just a couple of months (Iancu et al., 2017). Brief interventions were shown to be just as effective in reducing stress and anxiety as longer programs and were less burdensome, had higher compliance, and were more cost-effective (Yusufov et al., 2019).

Whether the programs being offered target relaxation training, coping skills, social support, psychoeducation, or CBT, they should be specifically tailored to the group receiving them (Yusufov et al., 2019). Given the populations they cater to, programs should be trauma-informed, teaching the importance of self-care in mitigating stress, especially when individuals may be exposed to traumatic coursework or fieldwork (Butler et al., 2017). It is not always possible to mitigate stress in helping populations, but there are things employers can help to buffer burnout and support job satisfaction (Hricova et al., 2020).

Satisfaction gives work meaning, pride, and joy, but is also determined by operating conditions, pay, and the nature of the work (Hricova et al., 2020). The strongest mediator of stress and emotional exhaustion is the nature of the work, but salaries, workload, and coworker relationships can improve conditions (Hricova et al., 2020). The more satisfied an individual is with their work, the stronger their sense is of personal accomplishment during times of stress, and the less they experience depersonalization (Hricova et al., 2020). Some professional self-care activities, such as required professional development or coursework, can increase stress, whereas psychological self-care, such as social support, positive thinking, and emotional regulation is more protective (Hricova et al., 2020).

Conclusion

Although stress is a normal and adaptive part of being alive, it activates biological systems through the HPA axis, SAM system, and releases cortisol (Bottaccioli et al., 2021; Lei et al., 2025). When stress becomes chronic, these systems become dysregulated, leading to immune, metabolic, and neurological dysfunction, such as impaired functioning of the prefrontal cortex, which is linked to executive dysfunction and poor emotional regulation (Bottaccioli et al., 2021; Hricova et al., 2020; Iqbal et al., 2023; Lei et al., 2025). Burnout can emerge as a psychosocial consequence, distinct from but also related to compassion fatigue and vicarious trauma, all of which are common in caregiving populations (Pirelli et al., 2020).

Teachers, parents, students, and HCPs experience unique stressors tied to emotional labour, exposure to trauma, and caregiving demands (Brandão et al., 2024; Butler et al., 2017; Iancu et al., 2017). Stress during developmental stages has compounding effects and marginalized groups experience even more added risk due to structural inequities, discrimination, and underrepresentation (Elliott et al., 2021; Yusufov et al., 2019). Gender differences exist in how individuals cope with stress, and individual experiences and personalities play a critical role in vulnerability to stress and resilience (Brandão et al., 2024; Hricova et al., 2020; Myers et al., 2012).

Self-care is multidimensional, spanning physical, psychological, emotional, professional, and spiritual domains (Geary et al., 2023). From a theoretical standpoint, self-care practices represent both problem-focused and emotion-focused strategies to cope within Lazarus and Folkman's (1984) model. Tools like the SCAP demonstrate that high engagement across the domains can reduce stress, distress, and burnout (Dorociak et al., 2017; Zahniser et al., 2017). Self-care can support wellbeing biologically, through nutrition, exercise, the gut-brain axis, and

neuroplasticity (Bottaccioli et al., 2021), psychologically, through coping skills and cognitive strategies (Yusufov et al., 2019), or relationally, through social support (Myers et al., 2012).

Multiple interventions lower stress and anxiety and there is no “one size fits all” approach (Coleman et al., 2016; Yusufov et al., 2019). Exercise can improve stress, balance neurotransmitters, and increase resilience, though outcomes vary by gender and beliefs about exercise (Myers et al., 2012; Elliott et al., 2021; Gómez-Borges et al., 2022). Mindfulness-based interventions show consistent benefits with nuanced results for perceived stress and anxiety (Dawson et al., 2020; Myers et al., 2012). Social support was also found to buffer stress but varied by population and gender (Iancu et al., 2017; Myers et al., 2012).

Institutions, such as graduate programs, should provide systemic encouragement via self-care training and faculty modeling, particularly in caregiving programs (Coleman et al., 2016; Myers et al., 2012; Zahniser et al., 2017). Trauma-informed curriculum is necessary to prepare students for the demands of their career and their likely exposure to difficult material (Butler et al., 2017). Employers must also assist in buffering burnout by improving job satisfaction through workload management, coworker support, and salaries (Hricova et al., 2020).

Grounded in Lazarus and Folkman’s (1984) theory, this review demonstrates how cognitive appraisal and self-care behaviours shape outcomes across contexts. While the evidence supports multidimensional interventions, research must continue to explore how systemic inequalities shape access and efficacy. Future research should prioritize inclusive, theory-driven studies to better tailor interventions for diverse populations.

Although stress and burnout are both experienced by individuals, they are also systemic issues (Hricova et al., 2020). Self-care is a necessary protective factor and an ethical responsibility for caregivers (Myers et al., 2012; Zahniser et al., 2017). Effective prevention

requires the integration of approaches that are biological, psychological, relational, and systemic (Bottaccioli et al., 2021; Rupert & Dorociak, 2019). Future research could continue to expand on digital versus self-guided interventions, cultural contexts, and intersecting identities (Elliott et al., 2021; Fan & Baharum, 2024; Dawson et al., 2020).

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