UNIVERSITY OF MINNESOTA

This is to certify that I have examined this copy of a Plan B Project by

Kalei Kleive

and have found that it is complete and satisfactory in all respects, and that any and all revisions required by the final examining committee have been made.

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Signature of Faculty Advisor

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Date

# The Role of Leader Health Orientation on the Relationship Between Employee Self-Care and Job Burnout Among Applied Behavior Analysis Practitioners

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SUBMITTED TO THE FACULTY OF THE
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**Abstract**

Professionals within the field of applied behavior analysis (ABA) are at a high risk of feeling exhausted and disengaged, both of which are components of burnout (e.g., Slowiak & DeLongchamp, 2022). Franke and colleagues (2014) introduced the concepts of self- and follower-directed health-oriented leadership; each were said to be an effective personal and job resource, respectively. Understanding that resources may be used to mitigate the strain of high job demands, this study examined the relationship between Employee Self-Care and burnout among ABA practitioners and how having a health-oriented leader (Leader Staff Care) influences that relationship. In a sample of 137 ABA practitioners, 87.25% reported moderate to high levels of burnout, and burnout was negatively associated with Employee Self-Care. While Employee Self-Care values, awareness, and behaviors were predictors of burnout, Leader Staff Care did not moderate the effect of Employee Self-Care on burnout. Though Leader Staff Care was not a significant moderator with all three components (i.e., value, awareness, behavior), Leader Staff Care behavior was the most influential moderator between Employee Self-Care and employee disengagement. The results of this study contribute to the literature by providing new knowledge on the role of health-oriented leadership and how it can be used as an organizational job resource by those in leadership roles to mitigate job demands and reduce burnout among ABA practitioners. Leaders should consider how they can best support employees self-care awareness, values, and behaviors as findings illustrate the importance of employee self-care as a personal resource.

*Keywords:* burnout, health-oriented leadership, self-care, staff care

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## Introduction

Health is important for many things, including development, social wellness, and survival. While health is generally understood as an important concept, societal norms don't always portray health as a priority. In 2019, the coronavirus (COVID-19) outbreak impacted the way employees performed their jobs. As mandated stay-at-home orders were put into place organizations began to alter their work environments and service delivery tactics. The abrupt shift into telecommunication services from home led to work being accessible 24/7 for many; therefore, occupational stress has become a greater concern within the last couple of years (Shao et al., 2021). Occupational stress can result from intrinsic job factors (e.g., physical work conditions, workload, new technology), relationships at work, career development, work/family conflict, and/or role stress (Rout & Rout, 2002).

Relatedly, the results of the *2021 Work and Well-Being Survey* indicated a lack of involvement in decision making and lack of growth and development opportunities at work as key workplace stressors (American Psychological Association [APA], 2021). When stressors (i.e., job demands) are not taken seriously, it can lead to chronic stress and work-related burnout (Bakker & de Vires, 2021). Burnout has been shown to be a precursor to long-term physical and mental health problems (Ahola & Hakanen, 2014). Results from the *2021 Work and Well-Being Survey* also indicated that 87% of employees think actions from their employer would help their mental health, and 32% of employees would like to see employers encouraging healthy lifestyles (APA, 2021). New data from the *2022 Work and Well-Being Survey* indicate that 81% of employees believe that *how*

employers support mental health will be an important consideration as employees consider future work (APA, 2022).

Within the workplace, leadership practices have been shown to have a positive impact on employee health and well-being (Kuoppala et al., 2008). Yukl (2006) asserts that this can take place in two ways, directly through personal interaction and indirectly through policy. In this study, we focused on direct personal interactions through leadership. Personal leadership takes place when a leader influences a follower directly through communication or behaviors. Kuoppala et al. (2008) found that consistent leader-follower support could lead to an increase in worker well-being. While many studies have used transformational leadership to show this, more recent evidence exists to indicate that a domain-specific leadership style (e.g., health-oriented leadership) can address more complex and specific issues directly related to health (Franke et al., 2014; Yao et al., 2021).

The concept of health-oriented leadership (HoL) has emerged as a factor that positively impacts employee well-being (Franke et al., 2014). HoL includes explicit health-oriented support through direct personal interaction. The majority of research on this topic focuses on leader *behaviors* toward their followers (Franke et al., 2014). While leadership behavior is known to impact follower health, well-being, and reduce burnout (Skakon et al., 2010), looking at the broader concept of HoL that includes health-oriented *values* and *awareness* can further the understanding and impact of this leadership style.

The current study examined the relationship between employee self-care behavior and job burnout among practitioners in the field of behavior analysis who work within

human service settings. In addition, we evaluated the influence that HoL has on the strength of this relationship.

## Applied Behavior Analysis Practitioners

Applied behavior analysis (ABA) is a subfield of behavior analysis that addresses socially significant human behavior (Leaf et al., 2017). ABA practitioners, many of whom work in human service settings, work to improve the human condition with behavior as the primary focus (BACB, n.d.). Certified ABA practitioners hold one of three different credentials. A Registered Behavior Technician (RBT) is a paraprofessional within the field of ABA. RBTs complete the initial behavior technician training and work alongside a supervisor within the field. The Board-Certified Assistant Behavior Analyst (BCaBA) is an undergraduate-level certification within the field of ABA. BCaBAs provide behavior analytic services under the supervision of a Board-Certified Behavior Analyst (BCBA). The BCBA is graduate-level certification; BCBAs can work as independent practitioners within the field. Receiving a doctoral degree within the ABA field does not grant privileges beyond those of the BCBA; however, those with a doctoral degree are able to apply for doctoral designation as a BCBA-D. Licensure of certified behavior analysts is rapidly becoming regulated; as of December 9, 2022, 36 states have adopted a law to license behavior analysts.

As recently as October 3, 2022, the Behavior Analyst Certification Board (BACB; n.d.) reported there to be 58,345 BCBA/BCBA-Ds, 5,578 BCaBAs, and 123,960 RBTs. While certified behavior analysts work in various applied settings including clinical, education, and/or management, 72.22% report primarily working with individuals diagnosed with autism spectrum disorder. Other applied work domains within behavior

analysis include education (6.92%), clinical behavior analysis (4.46%), intellectual and developmental disabilities (2.76%), and organizational behavior management (0.34%; BACB, n.d.). These statistics demonstrate the widespread impact that certified behavior analysts have within the human services profession.

## Job Burnout

Herbert Freudenberger introduced the concept of staff burnout in the 1970s. Staff burnout was explored in terms of physical (e.g., exhaustion, fatigue) and behavioral cues (e.g., irritation, frustration) and described as gradual emotional depletion and loss of motivation (Freudenberger, 1974). Not long after, employees within human services occupations began to use the term "burnout" as a way to express feelings of exhaustion, negative attitudes, and a lack of professional competence. The World Health Organization (WHO) recognized burnout as a syndrome resulting from chronic workplace stress that hasn't been managed appropriately. The WHO characterized burnout in three dimensions: (a) exhaustion, (b) increased mental distance from one's job, and (c) a sense of ineffectiveness (WHO, 2019). The WHO's characterization aligns with the most common conceptualizations of burnout within the literature.

In 1981, Maslach and colleagues developed the most well-known conceptualization of burnout. In 2021, Canu and colleagues reported that Maslach and colleagues' definition had been used in 76% of publications related to burnout. Maslach's original conceptualization of burnout was developed by looking at the common core elements seen within burnout literature (Maslach, 1982), and Maslach and colleagues (1996) defined burnout as excess emotional exhaustion, feelings of cynicism, and a sense of ineffectiveness. Exhaustion represents an individual's perceived emotional stress,

cynicism represents a sense of detachment and/or engagement in negative/hostile behavior, and ineffectiveness represents a feeling of incompetence or lack of achievement. While it has been recognized that burnout occurs outside of human services professions, Maslach and colleagues' (1981) conceptualization of burnout was focused on those who worked within human services, educational, or medical professions (Demerouti et al., 2001; Maslach, 1982; Maslach & Jackson, 1981).

In 2001, Demerouti and colleagues reported that enough evidence existed to indicate exhaustion and cynicism (disengagement) were the core dimensions of burnout, and lack of professional efficacy was reported as weakly correlated within the burnout conceptualization. Therefore, Demerouti and colleagues (2010) asserted that measures of burnout should evaluate two core dimensions: exhaustion and disengagement. In their conceptualization of burnout, exhaustion is defined as a cost associated with intensive physical, affective, and cognitive strain resulting from prolonged exposure to intense job demands; disengagement refers to distancing oneself from all things related to work. Demerouti and colleagues (2001) expanded the conceptualization of exhaustion to include physical and cognitive components to ensure more generalized applicability within the workforce.

The Maslach Burnout Inventory (MBI; Maslach et al., 1996) is recognized as the "gold standard" optimum tool to measure job burnout, though psychometric limitations have been identified (Demerouti et al., 2001; Demerouti et al., 2010; Schaufeli et al., 2020). One of the major shortcomings is that all items within the exhaustion and cynicism subscales are all worded positively, while items on the professional efficacy subscale are worded negatively. When considering psychometrics, this could lead to

artificial factor solutions or emulate relationships with other constructs that are necessarily accurate (Demerouti et al., 2010; Schaufeli et al., 2020). The Oldenburg Burnout Inventory (OLBI; Demerouti et al., 2010) appears to address the shortcomings of the MBI; not only does it evaluate exhaustion with a greater variety of components (i.e., affective, cognitive, and physical), but the subscales include items that are framed positively and negatively. Given the OBLI addresses the psychometric shortcomings within the MBI, we used Demerouti et al.'s (2010) conceptualization of burnout and the OLBI to evaluate job burnout among ABA practitioners in this study.

**Burnout Among Applied Behavior Analysis Practitioners**

Wigert (2020) reported that 76% of employees experience job burnout at least sometimes. Human services professionals have an imbalanced social relationship with clients at work; the practitioner gives, and the client receives. This asymmetrical relationship can elevate the risk of burnout with increased job demands (e.g., heavy workload, role overload), which can lead to a negative impact on the care a client receives (Dounavi et al., 2019; Slowiak & DeLongchamp, 2022).

In 2018, Plantiveau et al. reported that roughly two out of every three ABA professionals surveyed reported moderate to high levels of burnout (Plantiveau et al., 2018). Slowiak and DeLongchamp (2022) and Jay (2021) found that 72% and 87%, respectively, of ABA practitioners surveyed reported moderate to high levels of burnout, contradictory to previous research that found ABA practitioners experienced lower levels of burnout (Gibson et al., 2009; Jennett et al., 2003). Slowiak and DeLongchamp (2022) collected their data pre-pandemic, whereas Jay (2021) collected their data approximately one year following the start of the pandemic. While Jay (2021) had a smaller sample size

($N = 298$ vs. $N = 826$), the combined findings suggest burnout is very prevalent among ABA professionals, and the COVID-19 pandemic may have contributed to the increase in burnout ratings. The differences in burnout reported within these more recent studies, however, may also be due to different levels and quality of social support and supervision provided within organizations (Plantiveau et al., 2018).

Within the ABA profession, supervisors fulfill a leadership role. Required ABA supervision involves the direct observation of behavior-analytic service delivery in which individuals perform supervision activities, such as providing behavioral skills training, giving performance feedback, guiding problem-solving, reviewing written materials, evaluating the effects of the practitioner's service delivery, and monitoring trainee satisfaction (BACB, 2018). The lack of support from leaders/supervisors is a potential risk factor leading to burnout for those providing behavioral services (Gibson et al., 2009). Jay (2021) reported that lower levels of supervisor support were associated with higher levels of disengagement and exhaustion. If organizations fail to initiate solutions to mitigate these negative outcomes, ABA practitioners will continue to experience increased levels of burnout (Plantiveau et al., 2018).

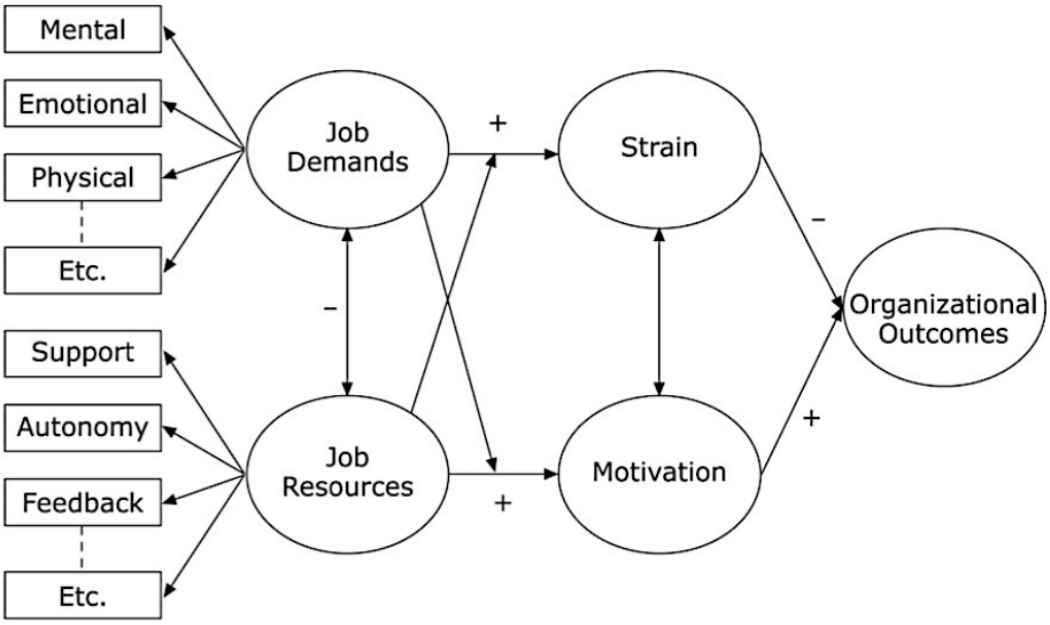
Additional research on burnout within the field of ABA is needed to better understand how job resources (e.g., leadership) and personal resources (e.g., self-care) can be used to mitigate the increase or change in work demands after the COVID-19 pandemic (Shao et al., 2021). The relationship between job demands, job resources, and burnout can be explained using the Job Demands-Resources theory.

## Job Demands-Resources Theory

The job demands-resources (JD-R) model (see Figure 1) was developed to provide a potential explanation for workplace stress (Demerouti et al., 2001). The model states that each job has its own risk factors within the dimensions of job demands and resources. The model also states that a disproportionate amount of job demands and job resources within the workplace may result in a form of strain (Bakker & Demerouti, 2007). Job demands require physical and/or psychological effort and skill, therefore, they lead to a certain amount of job stress (Bakker & Demerouti, 2007). Job demands may include time constraints, role ambiguity, peer/supervisor pressure, difficult working conditions, and extreme workload (Bakker & Demerouti, 2007). When job demands (Figure 1, upper left side) are particularly high, an individual's health and well-being deteriorate if resources are limited. Job resources are aspects of the job that help employees to complete their demands, reduce psychological and physical costs, and stimulate growth and development within the organization (Bakker & Demerouti, 2007).

**Figure 1**

*The Job Demands-Resources Model* (Bakker & Demerouti, 2007, p. 313)




According to the JD-R model, job resources (Figure 1, lower left side) must be high for employees to feel capable of making their job demands and goals achievable (Gordon et al., 2018). Two processes of the JD-R model have been used to explain the strain or motivation an organization portrays for its employees. Bakker and Demerouti (2007) explain these two main processes as the health impairment process and the motivational process. The health impairment process suggests that when organizations constantly exhaust employees through physical and emotional demands, they begin to lose energy. This depletion of energy can lead to severe health concerns over time. It can become dangerous for the individual and will in turn lead to absenteeism from the organization. The motivational process of the JD-R model capitalizes on organizational resources, such as support, feedback, and autonomy. Adding motivational resources to foster growth and development may lead to the achievement of work demands (extrinsic

motivation), foster worker well-being (intrinsic motivation; Bakker & Demerouti, 2007), and reduce job burnout (Bakker & de Vries, 2021).

Past research has shown that burnout is often the result of high job demands (e.g., work pressure, role stress, role ambiguity) that require sustained physical, emotional, or cognitive effort (Demerouti et al., 2001). After prolonged exposure to high job demands without proper mitigation tools, employees become chronically exhausted and distance themselves from their work both physically and psychologically. When made available, job resources can fulfill psychological needs and buffer the impact of job demands on burnout (Bakker & de Vries, 2021). Research has shown that the use of self-care strategies predicted decreased levels of burnout in a sample of ABA practitioners, suggesting that employee engagement in self-care behaviors may buffer the negative impact of high job demands (Slowiak & DeLongchamp, 2022). Additionally, health-oriented leadership (HoL) has been shown as a beneficial job resource used as a buffer between high job demands and employee health (Krick et al., 2021). Within the framework of the JD-R model, employee self-care and HoL may be viewed as resources to buffer the effects of job demands which may, in turn, lead to a decrease in burnout among ABA professionals.

## Employee Self-Care

The concept of self-care has been defined in many ways within the literature. Many describe self-care as a process (Baker et al., 2003), a set of strategies (Norcross, 2000), or as an ability (Collins, 2005). However, self-care is most commonly described as a set of actions or behaviors (Dorociak, 2015; Franke et al., 2014; Jordan, 2010; Lee & Miller, 2013). Richards et al. (2010) separated self-care into four main components:

physical, psychological, spiritual, and support self-care. Lee and Miller (2013) defined self-care as a two-dimensional framework that represents both personal and professional self-care behaviors. While many of these definitions are accepted, Franke and colleagues (2014) developed another way to conceptualize self-care. They define self-care as an internal resource that protects and promotes employee health by adding it as a resource to mitigate job demands and foster healthy working conditions. This conceptualization of self-care considers affective, cognitive, and behavioral components of self-care and embraces *values* of health, *awareness* of health, and health *behaviors*. Health values refers to the interest and importance employees place on their health. Health awareness refers to the attention employees give their health depending on working conditions. Health behavior refers to employees' personal activity, engagement, and motivation to behave in a health-oriented way. Franke et al. (2014) refer to this type of self-care—wherein employees as followers of organizational leaders, hold health-oriented values, are aware of health-relevant issues at work, and engage in health-promoting behavior—as self-directed HoL (Employee Self-Care). We adopted Franke and colleagues' (2014) conceptualization of self-care in the current study.

**Relationship Between Employee Self-Care and Burnout**

Instead of waiting for employees to become burnt out, emphasis should be placed on working proactively to decrease stress and burnout within the workplace (Wise et al., 2012). In recent years, organizations have begun emphasizing the importance of work-life balance, self-care, and self-assessment to move towards prevention (Advisory Committee on Colleague Assistance (n.d.); Koon, 2020). Within human services professions, high job demands that place immense pressure on the provider exist. These

high job demands can lead to exhaustion and disengagement, dimensions of burnout. Self-care strategies that reduce stress and promote a healthy, well-rounded lifestyle can be incorporated into many aspects of an organization to foster a "culture of self-care" (Barnett & Cooper, 2009, p.16). Satisfactory perceptions of one's work-life balance (Slowiak & DeLongchamp, 2022), less overcommitment (Franke et al., 2014), and engaging in professional self-care strategies (Slowiak & DeLongchamp, 2022) have been reported as strong predictors of reducing job burnout. Slowiak and DeLongchamp (2022) used Dorociak et al.'s (2017) conceptualization of self-care and discovered that self-care strategies (i.e., professional support, professional development, life balance, cognitive awareness, and daily balance) predicted decreased job burnout among behavior analysts. While a negative relationship between self-care behaviors and burnout has been reported, the current study adds insight into this relationship by evaluating a more holistic conceptualization of Employee Self-Care that includes health *values*, health *awareness*, and health *behavior*. This, therefore, led to the following hypothesis:

> **Hypothesis 1:** Employee Self-Care would be negatively related to employees' ratings of exhaustion and disengagement (burnout). Specifically, higher levels of Employee Self-Care would predict lower levels of burnout.

## Moderating role of Leader Health Orientation (Leader Staff Care) in the Employee Self-Care - Burnout Relationship

When applied to leaders' health orientation toward their followers (employees), the concept of health-oriented leadership (HoL; Franke et al., 2014) can be defined both generally and specifically. Generally, HoL is described as a positive form of leadership that improves follower health. Specifically, HoL is described as a leader's sole

consideration and engagement in employee health (Gurt et al., 2011). HoL requires direct communication of health-specific information from the leader to the follower. Health-oriented leaders are leaders who support followers through times of stress, clear up task ambiguity/prioritization, and work to motivate and embrace a healthy lifestyle. Furthermore, health-oriented leaders foster a supportive climate while encouraging work-life balance and serving as positive role models. Franke et al. (2014) describe two types of HoL when evaluating leader health orientation toward their employees and toward themselves: follower-directed HoL (i.e., Leader Staff Care) and self-directed health-oriented leadership (i.e., Leader Self-Care). Leader Staff Care is a follower-directed leadership tactic where leaders provide HoL as a resource to their followers. Leader Self-Care represents HoL directed towards oneself and is identical to Franke et al.'s (2014) conceptualization of Employee Self-Care. As such, the concepts of both Leader Staff Care and Leader Self-Care consist of three components: values, awareness, and behaviors in relation to health. Health-oriented *values* are described as the amount of interest and priority health-related practices receive at work; health-oriented *awareness* is described as the extent to which knowledge or perception of health is considered at work, and health-oriented *behaviors* are described as actionable patterns or habits pertaining to health at work. Each of these components can serve as a resource used to mitigate job demands.

While Employee/Leader Self-Care is initiated by the individual employee/leader, Leader Staff Care is described as a beneficial organizational (job) resource that supports a health-oriented workplace culture with the understanding that employees need support and motivation to protect their health (Franke et al., 2014; Klug et al., 2019). Bakker and

Demerouti (2007) state that motivational resources that foster growth and development may lead to the achievement of work demands (extrinsic motivation) and foster worker well-being (intrinsic motivation). The JD-R model (Bakker & Demerouti, 2007) supports the contention that Leader Staff Care, as a motivational and organizational job resource, does not only affect employees' health through the increase of Employee Self-Care but may also function as a moderator between job demands and employee health (Krick et al., 2021). Bakker and de Vries (2021) state that when organizational resources (e.g., healthy leadership) are used to mitigate job demands, decreases in exhaustion and disengagement (i.e., job burnout) are observed. This led to our second hypothesis:

> **Hypothesis 2:** Leader Staff Care would moderate the relationship between Employee Self-Care and employees' ratings of exhaustion and disengagement (burnout). Specifically, we expected that higher levels of Leader Staff Care will result in a stronger, negative relationship between Employee Self-Care and burnout.

## Health Values, Awareness, and Behavior

While Franke and colleagues (2014) measured the three components (values, awareness, and behavior) of HoL as one general construct, some researchers have evaluated single components (e.g., behavior; Kaluza et al., 2020; Köppe et al., 2018). In addition to exploring both employee self-directed HoL (Employee Self-Care) and follower directed HoL (Leader Staff Care) as single constructs, we plan to explore the unique contributions of each of the three HoL components. Some research has been done to measure the relationship between values and health behaviors (Stapleton et al., 2020); however, the researchers acknowledged that more specific value-based research is

needed. Veage et al. (2014) found that consistency between personal values and organizational values led to a decrease in burnout and an increase in overall well-being. In addition, Ortiz-Fune et al. (2020) found that an increase in awareness or acceptance of actions leads to an increase in personal accomplishment, and personal accomplishment has been used as a dimension of job burnout (Maslach et al., 1996). Thus, the results of these exploratory analyses would allow for the evaluation of the unique contributions of values and awareness to the relationship between health (self-care) behavior and burnout.

## Method

### Participants

Participants were practitioners employed within the human services area in the field of behavior analysis. The sample included students in ABA or ABA-related educational programs and those with relevant professional credentials (i.e., RBT, BCaBA, BCBA, BCBA-D). Inclusion criteria were that individuals must be (a) 18 years of age or older, (b) fluent in reading and understanding written English, (c) currently employed in the field of behavior analysis, (d) actively providing ABA services to clients, and (e) have a direct supervisor/leader from whom they receive clinical support (e.g., required supervisor or clinical leader). Potential participants self-identified via recruitment emails and posts disseminated to relevant professional organizations, listservs, and social media pages.

A convenience sample of 191 individuals consented to begin the study. Data for 54 respondents were removed from the study due to failure to confirm consent, meet the inclusion criteria, or failure to complete the majority of items necessary for analyses related to the hypothesis. Of those 54 participants, five were ineligible for not confirming consent to begin the study, one was ineligible because they were

not currently employed within the field of behavior analysis (screening item 3), five were ineligible because they were not actively providing ABA services to clients (screening item 4), and 24 were ineligible because they did not have a direct supervisor/leader (screening item 5); five stopped responding before completing the demographic items, and 14 stopped responding during the assessment of burnout and HoL making their data unusable to test the study's hypotheses. Partial data for 72 individuals were included within the final sample of 137 participants; their data was usable in at least one analysis related to the study's hypotheses. For each individual analysis, the reported sample sizes are dependent on the provided responses. Table 1 shows the characteristics of the sample, including information related to sociodemographic and job-related characteristics.

**Table 1**

*Sociodemographic and Job-related Characteristics of Participants*

| Characteristics and Categories | *n* | *%* |
|---|---|---|
| Age | | |
| 18-24 | 10 | 7.3 |
| 25-34 | 75 | 54.7 |
| 35-44 | 37 | 27.0 |
| 45-54 | 9 | 6.6 |
| 55-64 | 4 | 2.9 |
| 65-74 | 2 | 1.5 |
| Sex | | |
| Male | 47 | 34.3 |
| Female | 90 | 65.7 |
| Prefer not to answer | 0 | 0.0 |

| | | |
|---|---|---|
| Gender | | |
| Male | 45 | 32.8 |
| Female | 87 | 63.5 |
| Transgender | 0 | 0.0 |
| None of the above | 3 | 2.2 |
| Prefer not to answer | 2 | 1.5 |
| Location | | |
| North America | 128 | 93.4 |
| South America | 3 | 2.2 |
| Europe | 6 | 4.4 |
| Africa | 0 | 0.0 |
| Asia | 0 | 0.0 |
| Oceania | 0 | 0.0 |
| Prefer not to answer | 0 | 0.0 |
| Ethnicity | | |
| Hispanic or Latino | 44 | 32.1 |
| Not Hispanic or Latino | 91 | 66.2 |
| Prefer not to answer | 2 | 1.5 |
| Race | | |
| American Indian or Alaska Native | 22 | 16.1 |
| Asian | 7 | 5.1 |
| Black or African American | 5 | 3.6 |
| Native Hawaiian or Other Pacific Islander | 1 | 0.7 |
| White | 89 | 65.0 |
| Other | 8 | 5.8 |
| Prefer not to answer | 5 | 3.6 |

| | | |
|---|---|---|
| Primary Area of Professional Emphasis | | |
| Autism spectrum disorders | 69 | 50.4 |
| Behavioral gerontology | 4 | 2.9 |
| Clinical behavior analysis | 22 | 16.1 |
| Behavioral pediatrics | 6 | 4.4 |
| Brain injury rehabilitation | 3 | 2.2 |
| Child welfare | 4 | 2.9 |
| Corrections and delinquency | 0 | 0.0 |
| Dissemination of behavior analysis | 2 | 1.5 |
| Education | 6 | 4.4 |
| Higher education | 2 | 1.5 |
| Intellectual & developmental disabilities | 9 | 6.6 |
| Non-University research | 1 | 0.7 |
| Organizational behavior management | 2 | 1.5 |
| Parent & caregiver training | 2 | 1.5 |
| Professional supervision | 1 | 0.7 |
| Public policy & advocacy | 1 | 0.7 |
| Health, sport & fitness | 3 | 2.2 |
| Prefer not to answer | 0 | 0.0 |
| Employment | | |
| Self-employed | 15 | 10.9 |
| Private sector employee in for-profit company or organization | 84 | 61.3 |
| Private sector employee in non-profit organization | 24 | 17.5 |
| Government employee | 8 | 5.8 |
| Multiple types of employment | 6 | 4.4 |
| Prefer not to answer | 0 | 0.0 |

| | | |
|---|---|---|
| Setting | | |
| ABA clinic or center | 36 | 26.3 |
| Home-based | 25 | 18.2 |
| Remote/telehealth | 16 | 11.7 |
| Residential care | 13 | 9.5 |
| School | 10 | 7.3 |
| Other | 2 | 1.5 |
| Multiple settings | 35 | 25.5 |
| Prefer not to answer | 0 | 0.0 |
| Certification | | |
| RBT | 26 | 19.0 |
| BCaBA | 18 | 13.1 |
| BCBA | 82 | 59.9 |
| BCBA-D | 9 | 6.6 |
| None; working toward certification | 1 | 0.7 |
| Prefer not to answer | 1 | 0.7 |
| Completing coursework for BCaBA® or BCBA® | | |
| Yes | 66 | 48.2 |
| No | 70 | 51.1 |
| Prefer not to answer | 1 | 0.7 |
| Receiving supervision for certification | | |
| Yes | 65 | 47.4 |
| No | 69 | 50.4 |
| Prefer not to answer | 3 | 2.2 |

| | | |
|---|---|---|
| Currently providing supervision to RBTs or BCaBA | | |
| Yes | 93 | 67.9 |
| No | 43 | 31.4 |
| Prefer not to answer | 1 | 0.7 |
| Currently providing consultation to first-year BCBAs who are providing supervision to trainees accruing fieldwork toward BCBA and BCaBA certification | | |
| Yes | 59 | 43.1 |
| No | 76 | 55.5 |
| Prefer not to answer | 2 | 1.5 |
| Years certified | | |
| Not yet certified | 5 | 3.6 |
| <1 year | 18 | 13.1 |
| 1-2 years | 37 | 27.0 |
| 3-4 years | 45 | 32.8 |
| 5-10 years | 19 | 13.9 |
| >10 years | 12 | 8.8 |
| Prefer not to answer | 1 | 0.7 |
| Counting all locations where your employer (or supervision site) operates, what is the total number of persons who work there | | |
| 1 employee (self-employed) | 1 | 0.7 |
| 2 - 4 employees | 7 | 5.1 |
| 5 - 9 employees | 24 | 17.5 |
| 10 - 19 employees | 19 | 13.9 |
| 20 - 49 employees | 24 | 17.5 |
| 50 - 99 employees | 12 | 8.8 |
| 100 - 249 employees | 12 | 8.8 |

| | | |
|---|---|---|
| 250 - 499 employees | 12 | 8.8 |
| 500 - 999 employees | 6 | 4.4 |
| >1000 employees | 10 | 7.3 |
| Unsure | 10 | 7.3 |
| Prefer not to answer | 0 | 0.0 |
| How many certified professionals (RBTs, BCaBAs, BCBAs, BCBA-Ds) do you have on your team? | | |
| Work alone | 5 | 3.6 |
| 1 – 3 | 34 | 24.8 |
| 4 – 5 | 37 | 27.0 |
| 6 – 10 | 20 | 14.6 |
| >10 | 32 | 23.4 |
| Unknown | 9 | 6.6 |
| Prefer not to answer | 0 | 0.0 |
| How many companies have you worked for over the past 5 years? | | |
| 1 | 38 | 27.7 |
| 2 | 61 | 44.5 |
| 3 | 20 | 14.6 |
| 4 | 5 | 3.6 |
| 5 | 5 | 3.6 |
| 6 | 1 | 0.7 |
| Missing | 7 | 5.1 |

*Note.* N = 137. RBT = Registered Behavior Technician; BCaBA = Board Certified Assistant Behavior Analyst; BCBA = Board Certified Behavior Analyst; BCBA-D = Board Certified Behavior Analyst Doctoral.

**Procedure**

A recruitment message was disseminated to certified behavior analysts via mass email by the profession's certifying organization (i.e., BACB). Recruitment messages were also sent to contacts of relevant professional membership organizations within the field of behavior analysis with a request for distribution (e.g., international, national, regional, state chapters, special interest groups). Recruitment messages were distributed as postings on relevant social media pages and in relevant social media groups with the permission of the page owner or group administrator (e.g., Applied Behavior Analysis, Balanced Behavior Analyst, Behavior Analysts Get Fit, Behavior Analysis in Health Sport and Fitness, Behavior Analysts for Autism, Students of Applied Behavior Analysis), and posted on the faculty advisor's professional social media accounts. Recruitment messages included a description of the study, inclusion criteria, participant requirements, and a link to a web-based survey hosted on Qualtrics (see Appendix A). Participants provided electronic consent and responded to screening items to confirm eligibility (see Appendix B). Sociodemographic and job-related information (e.g., age, sex, gender, organization, employee position, tenure) was collected, as well as information regarding employee self-directed HoL (Employee Self-Care) and follower-directed HoL (Leader Staff Care), and burnout (see Appendix C).

Minimal risk was associated with this study. Participants who experience high levels of burnout or exhaustion as a result of their work may have experienced slight emotional discomfort when responding to the survey items. A statement was included to encourage participants to reach out to their employee health or employee assistance program administrator following survey completion if they feel the need for emotional

support. At the end of the survey, a link to the Mayo Clinic's (2018) article, *Job Burnout: How to Spot It and Take Action*, was provided as an informational aid to help employees understand the antecedents and outcomes associated with job burnout.

## Measures

### *Demographic Characteristics*

The survey included 18 questions with the purpose of collecting participant sociodemographic and job-related information, including age, sex, gender, geographic location, ethnicity, race, employment type, employment setting, supervisory status, certification, years of experience, team size, and organization size. Answers to these questions provided further context for each employee's work environment and highlighted variables that may contribute to differences in employee self-care, leader staff care, and burnout.

### *Burnout*

The Oldenburg Burnout Inventory (OLBI; Demerouti et al., 2010) is a 16-item measure that conceptualizes burnout as consisting of two dimensions: exhaustion and disengagement. Each subscale includes eight items, with half of the items worded positively and the other half worded negatively. Sample OLBI items include "I always find new and interesting aspects in my work" and "after my work, I usually feel worn out and weary" (Demerouti et al., 2010). Respondents were asked to indicate the degree of their agreement by using a five-point Likert-type scale ranging from 1 (*strongly agree)* to 5 (*strongly disagree*). Scores for each subscale were calculated by summing individual item scores and computing the average; higher scores reflected higher levels of burnout (i.e., exhaustion and disengagement).

The exhaustion subscale of the OLBI has been found to be related to the exhaustion measure of the Maslach Burnout Inventory - General Survey ($r$ = .62; MBI-GS; Maslach et al., 1996), and the disengagement subscale is related to the cynicism measure of the MBI ($r$ = .52; Demerouti et al., 2003). Internal consistency within this study was $\alpha$ = .74 for the disengagement subscale and $\alpha$ = .86 for the exhaustion subscale.

***Leader Staff Care (Follower-Directed Health-oriented Leadership)***

Leader Staff Care was assessed with the 31-item HoL questionnaire (Franke et al., 2014) which assesses health values (4 items), health awareness (8 items), and health behaviors (19 items). The behavioral component considers personal lifestyle (2 items), positive health behavior (13 items), and negative health behavior (3 items). Sample Staff Care HoL items include "My supervisor immediately notices when something is wrong with my health" and "My supervisor tries to reduce my demands by optimizing my work-life balance (e.g., take regular breaks, avoid overtime, avoid the expiry of vacation)" (Franke et al., 2014). Respondents were asked to indicate the degree of their agreement by using a five-point Likert-type scale ranging from 1 (*strongly agree)* to 5 (*strongly disagree*). The average overall scale score and scores within each of the three components were calculated by summing individual item scores and computing the average; higher scores reflected higher levels of Leader Staff Care.

Franke and colleagues (2014) reported internal consistency for each of the three components was as follows: health values $\alpha$ = .78, health awareness $\alpha$ = .84, and health behaviors $\alpha$ = .88. Internal consistency within this study was reported as health values $\alpha$ = .78, health awareness $\alpha$ = .80, health behaviors $\alpha$ = .88, and overall $\alpha$ = .92.

### *Employee self-care (Self-Directed Health-oriented Leadership)*

Employee Self-Care was assessed with the 25-item HoL questionnaire (Franke et al., 2014) which assesses health value (3 items), health awareness (8 items), and health behaviors (14 items). The behavioral component considers personal lifestyle (2 items), positive health behavior (9 items), and negative health behavior (3 items). Sample self-care HoL items include "Time and again I expect too much of myself at work" and "I do a lot for my health in my free time" (Franke et al., 2014). Respondents were asked to indicate the degree of their agreement by using a five-point Likert-type scale ranging from 1 (*not at all true*) to 5 (*completely true*). The average overall scale score and scores within each of the three components were calculated by summing individual item scores and computing the average; higher scores reflected higher levels of Employee Self-Care.

Franke and colleagues (2014) reported internal consistency for each of the dimensions as follows: health values $\alpha$ = .68, health awareness $\alpha$ = .80, and health behaviors $\alpha$ = .73. Internal consistency within this study was reported as health values $\alpha$ = .69, health awareness $\alpha$ = .76, health behaviors $\alpha$ = .66, and overall $\alpha$ = .83.

## Study Design, Statistical Analyses, and Power Analysis

This study was a non-experimental, cross-section design, which allowed for analysis of whether Employee Self-Care predicted burnout when moderated by Leader Staff Care. A correlation matrix was produced for all variables to examine relationships among study variables and identify potential covariates. A simple linear regression analysis was run to examine the predictive relationship between self-care and both dimensions of burnout (i.e., exhaustion, disengagement).

A moderation analysis with multiple regression was used to explore how leader health orientation (Leader Staff Care) affects the relationship between Employee Self-Care and burnout. Variables were mean centered before running the analyses to avoid potential multicollinearity issues with the interaction terms (Hayes, 2022). Interaction terms were created to evaluate the independent and combined effects of Employee Self-Care and Leader Staff Care. To estimate the sample size for the analysis, an a priori statistical power analysis using G*power 3.1 (Faul et al., 2009) was performed. The necessary sample size, given one tested predictor (Employee Self-Care x Leader Staff Care interaction) and three total predictors (Employee Self-Care, Leader Staff Care, and the Employee Self-Care x Leader Staff Care interaction), for a small effect size ($f^2$) = 0.02, $\alpha$ = 0.05, and power = 0.80, was $N$ = 395; the necessary sample size for a medium effect size ($f^2$) = 0.15, $\alpha$ = 0.05, and power = 0.80 was $N$ = 55. IBM SPSS Statistics, Version 27 was used for the analyses, along with Hayes PROCESS macro, model 1, v4.1 (Hayes, 2022).

## Results

### Descriptive Statistics

Table 2 lists the means, standard deviations, and score ranges of the primary study variables. No less than 134 of 137 participants responded to each of the variable scale measures. Findings revealed the average Leader Staff Care score of $M$ = 2.8 indicates that the sample reported [above average] levels of follower-directed HoL. Employee Self-Care among participants was revealed as a score of $M$ = 3.2, which indicates above-average levels of self-directed HoL.

Burnout was measured using a 4-point Likert scale, and others using the same measure have reported burnout in terms of low, moderate, and high levels (Jay, 2021; Slowiak & DeLongchamp, 2022). For this study, we considered scores of 1.00 – 2.00 as low burnout, 2.01 – 2.99 as moderate burnout, and 3.00 – 4.00 as high burnout. The majority of this study's sample reported moderate burnout ($n$ = 100, 73%), followed by high ($n$ = 21, 15.3%) and low ($n$ = 16, 11.7%) burnout. The finding revealed participants' above-average levels of both exhaustion ($M$ = 2.6) and disengagement ($M$ = 2.4).

**Table 2**

*Leader Staff Care, Employee Self-Care, and Burnout Descriptive Statistics*

| Variable | *n* | *M* | *SD* | Range |
|---|---|---|---|---|
| Leader Staff Care | 136 | 2.8 | 0.7 | 1.3 – 4.7 |
| Awareness | 136 | 2.7 | 0.8 | 1.0 – 4.6 |
| Values | 135 | 3.0 | 1.0 | 1.0 – 5.0 |
| Behaviors | 134 | 2.8 | 0.8 | 1.2 – 5.0 |
| Employee Self-Care | 137 | 3.2 | 0.5 | 2.2 – 4.7 |
| Awareness | 137 | 3.2 | 0.7 | 1.6 – 5.0 |
| Values | 137 | 3.3 | 0.9 | 1.0 – 5.0 |
| Behaviors | 137 | 3.2 | 0.5 | 2.1 – 4.6 |
| Burnout: Disengagement | 137 | 2.4 | 0.5 | 1.0 - 4.0 |
| Burnout: Exhaustion | 137 | 2.6 | 0.5 | 1.0 - 3.9 |

*Note.* Responses to items for the Health-Oriented Leadership Staff Care and Health-Oriented Leadership self-care measures ranged from 1 (*not at all true*) to 5 (*completely true*). Responses to items for the Oldenburg Burnout Inventory ranged from 1 *(strongly agree)* to 4 *(strongly disagree).*

## Intercorrelations Among Study Variables

Pearson product-moment correlation coefficients were calculated, and a correlation matrix was created to investigate the relationships among the study's variables. Table 3 shows the intercorrelations between Employee Self-Care, Leader Staff Care, burnout, and sex. Individual components of Employee Self-Care and Leader Staff Care are included to provide a closer look at the relationship between these constructs and both dimensions of burnout. Correlations between study variables and demographic variables were computed to identify potential covariates for this study.

Pearson's *r* correlation analysis indicated a nearly moderate, negative relationship between Employee Self-Care and disengagement ($r$ = -.26), and a nearly large, negative relationship between Employee Self-Care and exhaustion ($r$ = -.45). A significant and large negative relationship was found between Leader Staff Care and both dimensions of burnout (disengagement, $r$ = -.48; exhaustion, $r$ = -.44). Sex was selected as a covariate due to its correlation with disengagement ($r$ = .20) and exhaustion, ($r$ = .30).

## Relationship Between Employee Self-Care and Burnout

### *Employee Self-Care and Disengagement*

Hypothesis 1 stated that higher levels of Employee Self-Care would predict lower levels of burnout. A simple linear regression was used to evaluate whether Employee Self-Care predicted disengagement, while controlling for sex. Employee Self-Care explained 10.5% of the variance in disengagement, $R^2$ = .11 $F(2, 134) = 7.89$, $p < .001$, with a near-medium effect ($f^2$ = .12) and observed power = 0.96. The unstandardized regression coefficient ($b$ = -.23) indicated that an increase in one unit corresponded, on average, to a decrease in disengagement by 0.23 points.

**Table 3**

*Intercorrelations Between Leader Staff Care, Employee Self Care, and Burnout Descriptive Statistics*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Leader Staff Care | --- | | | | | | | | | | |
| 2. Leader Awareness | .88** | --- | | | | | | | | | |
| 3. Leader Values | .73** | .66** | --- | | | | | | | | |
| 4. Leader Behaviors | .95** | .71** | .56** | --- | | | | | | | |
| 5. Employee Self-Care | .27** | .19* | .22* | .28** | --- | | | | | | |
| 6. Employee Awareness | .08 | .06 | .17 | .05 | .83** | --- | | | | | |
| 7. Employee Values | .11 | .04 | .14 | .12 | .77** | .65** | --- | | | | |
| 8. Employee Behaviors | .39** | .28** | .22* | .42** | .88* | .50** | .51** | --- | | | |
| 9. Burnout: Disengagement | -.48** | -.43** | -.37** | -.43** | -.26** | -.13** | -.11 | -.33** | --- | | |
| 10. Burnout: Exhaustion | -.44** | -.38** | -.29** | -.41** | -.45** | -.30** | -.27** | -.49** | .71** | --- | |
| 11. Sex (covariate) | -.29** | -.24** | -.004 | -.32** | -.04 | .17 | .11 | -.23** | .20** | .30** | --- |

*Note.* $N = 137$. All values are based on listwise exclusion. *$p < .01$. **$p < .001$

### *Employee Self-Care and Exhaustion*

A simple linear regression was used to evaluate whether Employee Self-Care predicts exhaustion, while controlling for sex. Employee Self-Care explained 28.5% of the variance in exhaustion, $R^2 = .29$, $F(2, 134) = 26.76$, $p < .001$, with a large effect ($f^2 = 0.40$) and observed power = 0.99. The unstandardized regression coefficient ($b = -.46$) indicated that an increase in one unit corresponded, on average, to a decrease in exhaustion by 0.46 points.

The results from both simple linear regression analyses support Hypothesis 1. Higher levels of reported Employee Self-Care predicted lower levels of the disengagement and exhaustion dimensions of burnout.

## Relationship Between Employee Self-Care and Leader Staff Care on Burnout

### *Disengagement*

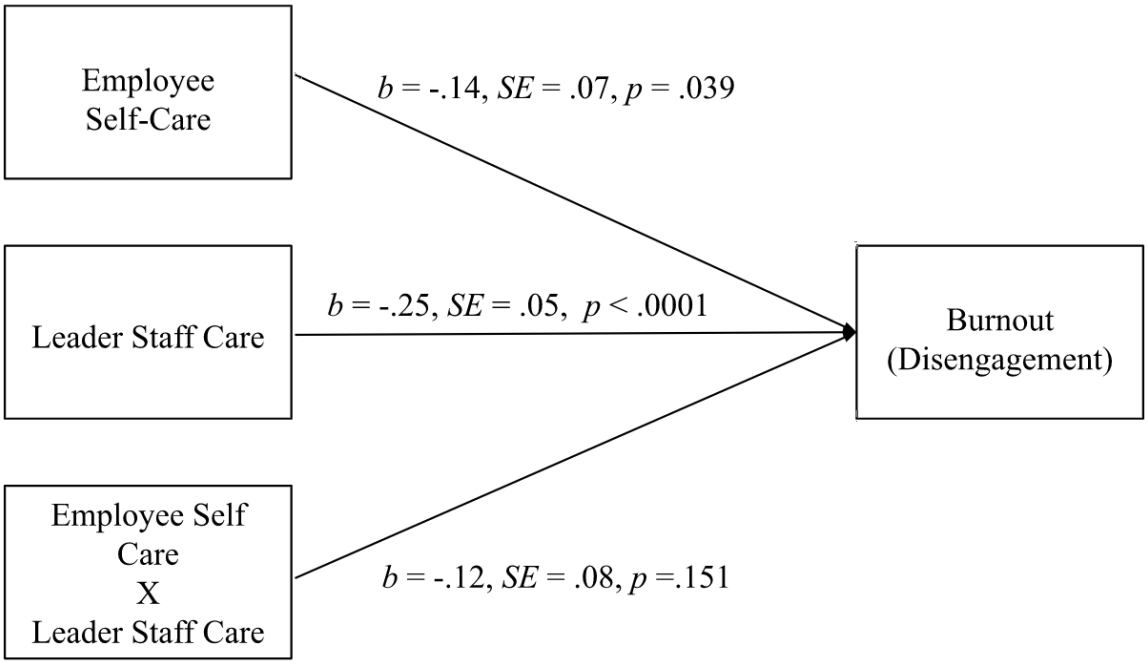
A simple moderation analysis using the PROCESS macro and Model 1 was performed to test the hypothesis that the relationship between Employee Self-Care and disengagement would be moderated by Leader Staff Care, while controlling for sex (Figure 2). The full model, with the predictors and the covariate, was successful in predicting disengagement [$R^2 = .26$, $F(4, 131) = 11.68$, $p < .001$].

Independently, the relationship between Employee Self-Care and disengagement was [$b = -.14$, $t(1) = -2.08$, $p = .0391$]. The relationship between Leader Staff Care and disengagement was [$b = -.25$, $t(1) = -4.73$, $p < .0001$]. The interaction of Employee Self-Care x Leader Staff Care did not yield a significant change to the model, $F(1,131) = 2.08$, $p = .15$, $\Delta R^2 = .01$. The Employee Self-Care x Leader Staff Care interaction accounted for

approximately 1.17% of the variance in disengagement, $b$ = -.12, $t(1)$ = -1.44, $p$ = .151, with almost no effect ($f^2$ = .01) and observed power = .25.

**Figure 2**

*Moderation Analysis Results: Leader Staff Care and Disengagement*




***Exhaustion***

A simple moderation analysis using the PROCESS macro and Model 1 was performed to test the hypothesis that the relationship between Employee Self-Care and exhaustion would be moderated by Leader Staff Care, while controlling for sex (Figure 3). The full model, with the predictors and the covariate, was successful in predicting disengagement [$R^2$ = .36, $F(4, 131)$ = 18.25, $p$ < .001].

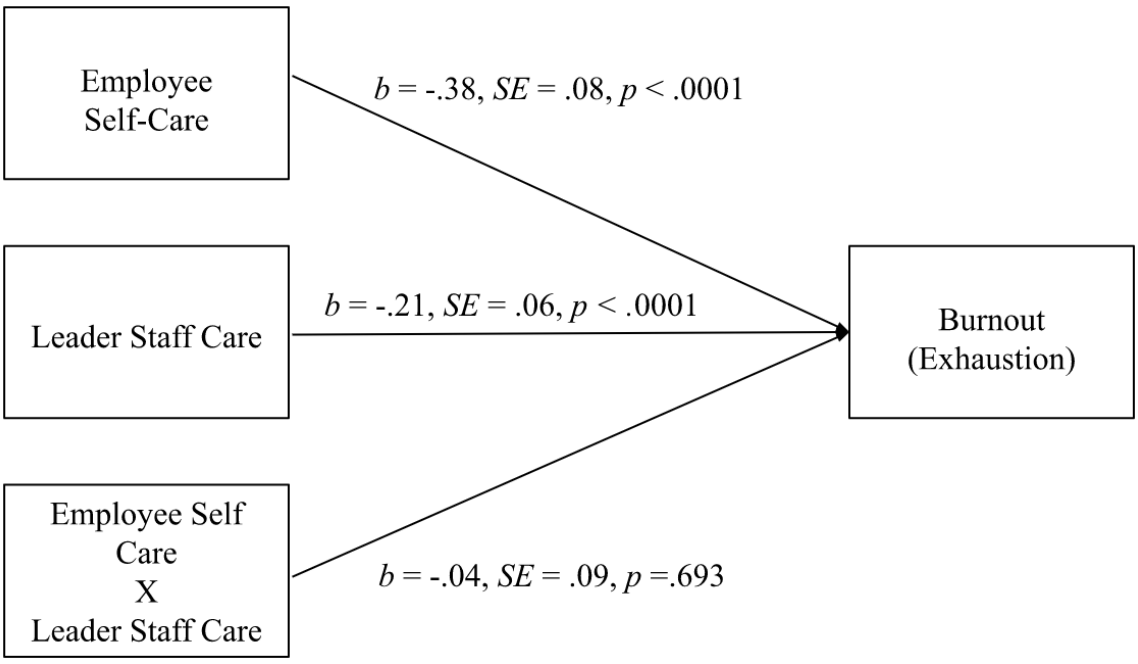
Independently, the relationship between Employee Self-Care and exhaustion was [$b$ = -0.38, $t(1)$ = -5.01, $p$ < .0001]. The relationship between Leader Staff Care and exhaustion was [$b$ = -.21, $t(1)$ = -3.57, $p$ < .0001]. The interaction of Employee Self-Care x Leader Staff Care did not yield a significant change to the model, $F(1,131)$ = .16, $p$ =

.693, $\Delta R^2 = .001$. The Employee Self-Care x Leader Staff Care interaction accounted for approximately 0.08% of the variance in disengagement, $b = .04$, $t(1) = .40$, $p = .693$, with almost no effect ($f^2 = .001$) and observed power = .07.

The results from both simple moderation analyses fail to support Hypothesis 2. While higher levels of Leader Staff Care predict lower levels of employee disengagement and exhaustion, it does not influence the strength of the relationship between Employee Self-Care and burnout.

**Figure 3**

*Moderation Analysis Results: Leader Staff Care and Exhaustion*



## Exploratory Analyses

### *Employee Self-Care Values, Awareness, and Behavior as Predictors of Disengagement*

To explore the unique contributions of Employee Self-Care values, awareness, and behavior, three simple linear regression analyses were used to evaluate whether each component of Employee Self-Care predicts disengagement, while controlling for sex. Results showed that self-care values explained 5.7% of the variance in disengagement, $R^2 = 0.06$ $F(2, 134) = 4.08$, $p = .019$. The unstandardized regression coefficient ($b = -.07$) indicated that an increase in one unit corresponded, on average, to a decrease in disengagement by 0.07 points. Employee Self-Care awareness explained 6.5% of the variance in disengagement, $R^2 = .07$ $F(2, 134) = 4.69$, $p = .011$. The unstandardized regression coefficient ($b = -.11$) indicated that an increase in one unit corresponded, on average, to a decrease in disengagement by 0.11 points. Employee Self-Care behavior explained 12.7% of the variance in disengagement, $R^2 = .13$ $F(2, 134) = 9.77$, $p < .001$. The unstandardized regression coefficient ($b = -.27$) indicated that an increase in one unit corresponded, on average, to a decrease in disengagement by 0.27 points.

### *Employee Self-Care Values, Awareness, and Behavior as Predictors of Exhaustion*

To explore the unique contributions of Employee Self-Care values, awareness, and behavior, three simple linear regression analyses were used to evaluate whether each component of Employee Self-Care predicts exhaustion, while controlling for sex. Results showed that Employee Self-Care values explained 18.3% of the variance in exhaustion, $R^2 = .18$ $F(2, 134) = 14.99$, $p < .001$. The unstandardized regression coefficient ($b = -.18$) indicated that an increase in one unit corresponded, on average, to a decrease in exhaustion by 0.18 points. Employee Self-Care awareness explained 21.3% of the

variance in exhaustion, $R^2 = .21$ $F(2, 134) = 18.08$, $p < .001$. The unstandardized regression coefficient ($b = -.29$) indicated that an increase in one unit corresponded, on average, to a decrease in exhaustion by 0.29 points. Employee Self-Care behavior explained 27.4% of the variance in exhaustion, $R^2 = .27$ $F(2, 134) = 25.28$, $p < .001$. The unstandardized regression coefficient ($b = -.45$) indicated that an increase in one unit corresponded, on average, to a decrease in exhaustion by 0.45 points.

The results of both simple linear regression analyses show interesting results that could be explored further. These exploratory analyses revealed that higher levels of Employee Self-Care values, awareness, and behavior independently predict lower levels of disengagement and exhaustion. Employee Self-Care behavior was the strongest predictor of both disengagement and exhaustion.

### *Leader Values, Awareness, and Behavior as Moderators of the Relationship Between Employee Self-Care and Disengagement*

To explore the unique contributions of Leader Staff Care values, awareness, and behavior, three simple moderation analyses using the PROCESS macro and Model 1 were performed to evaluate whether each component of Leader Staff Care individually moderates the relationship between Employee Self-Care and disengagement, while controlling for sex.

***Values.*** The full model, with Employee Self-Care (overall) and Leader Staff Care values as predictors and sex as a covariate, predicted disengagement, $R^2 = .21$, $F(4,130) = 8.62$, $p < .001$. The addition of the interaction of Employee Self-Care x Leader Staff Care values did not yield a significant change to the model, $F(1,130) = .69$, $p = .41$, $\Delta R^2 =$

.004. The Employee Self-Care x Leader Staff Care values interaction accounted for approximately 0.42% of the variance in disengagement, $b$ = -.05, $t(1)$ = -.83, $p$ = .407].

***Awareness.*** The full model, with Employee Self-Care (overall) and Leader Staff Care values as predictors and sex as a covariate, predicted disengagement, $R^2$ = .24, $F(4,131) = 10.18$, $p < .001$. The addition of the interaction of Employee Self-Care x Leader Staff Care values did not yield a significant change to the model, $F(4,131) = 1.14$, $p$ = .288, $\Delta R^2$ = .01. The Employee Self-Care x Leader Staff Care values interaction accounted for approximately 0.66% of the variance in disengagement, $b$ = -.08, $t(1)$ = -.11, $p$ = .288].

***Behavior.*** The full model, with Employee Self-Care (overall) and Leader Staff Care values as predictors and sex as a covariate, predicted disengagement, $R^2$ = .23, $F(4,129) = 9.66$, $p < .001$. The addition of the interaction of Employee Self-Care x Leader Staff Care values did not yield a significant change to the model, $F(1,129) = 3.17$, $p$ = .077, $\Delta R^2$ = .02. The Employee Self-Care x Leader Staff Care values interaction accounted for approximately 1.89% of the variance in disengagement, $b$ = -.14, $t(1)$ = -1.78, $p$ = .08].

### *Leader Values, Awareness, and Behavior as Moderators of the Relationship Between Employee Self-Care and Exhaustion*

To explore the unique contributions of Leader Staff Care values, awareness, and behavior, three simple moderation analyses using the PROCESS macro and Model 1 were performed to evaluate whether each component of Leader Staff Care individually moderates the relationship between Employee Self-Care and exhaustion, while controlling for sex.

***Values.*** The full model, with Employee Self-Care (overall) and Leader Staff Care values as predictors and sex as a covariate, predicted exhaustion, $R^2 = .33$, $F(4,130) = 16.25$, $p < .001$. The addition of the interaction of Employee Self-Care x Leader Staff Care values did not yield a significant change to the model, $F(1,130) = .0001$, $p = .990$, $\Delta R^2 = .00$. The Employee Self-Care x Leader Staff Care values interaction accounted for approximately 0.00% of the variance in exhaustion, $b = -.001$, $t(1) = -.01$, $p = .990$].

***Awareness.*** The full model, with Employee Self-Care (overall) and Leader Staff Care awareness as predictors and sex as a covariate, predicted exhaustion, $R^2 = .35$, $F(4,131) = 17.47$, $p < .001$. The addition of the interaction of Employee Self-Care x Leader Staff Care awareness did not yield a significant change to the model, $F(1,131) = 0.05$, $p = .83$, $\Delta R^2 = .0002$. The Employee Self-Care x Leader Staff Care awareness interaction accounted for approximately 0.02% of the variance in exhaustion, $b = .02$, $t(1) = .21$, $p = .831$].

***Behavior.*** The full model, with Employee Self-Care (overall) and Leader Staff Care behavior as predictors and sex as a covariate, predicted exhaustion, $R^2 = .34$, $F(4,129) = 16.64$, $p < .001$. The addition of the interaction of Employee Self-Care x Leader Staff Care behavior did not yield a significant change to the model, $F(1,129) = .22$, $p = .641$, $\Delta R^2 = .001$. The Employee Self-Care x Leader Staff Care behavior interaction accounted for approximately 0.11% of the variance in exhaustion, $b = .04$, $t(1) = .47$, $p = .641$].

The combined results from the exploratory moderation analyses revealed that Leader Staff Care values, awareness, and behaviors did not, independently, significantly

moderate the relationship between Employee Self-Care and disengagement and exhaustion (burnout).

## Discussion

The current study evaluated the relationship between Employee Self-Care and burnout among ABA practitioners, along with the moderating effect of Leader Staff Care. The results of this study revealed that Employee Self-Care predicted burnout, but Leader Staff Care did not moderate the relationship. The positive association between Employee Self-Care and burnout found in this study is consistent with studies on self-care and burnout within ABA, healthcare, and human services professions (Barnett & Cooper, 2009; Slowiak & DeLongchamp, 2022).

The average overall Employee Self-Care score, including all three components (value, awareness, behavior), was $M = 3.2$, suggesting that practitioners within the field of ABA occasionally value, maintain awareness, and behave in a way that supports their health at work. Overall, Employee Self-Care had the strongest negative relationship with exhaustion ($r = -.45$). Self-care strategies (e.g., life balancing, professional support) have been identified as predictors of decreased stress and emotional exhaustion (Dorociak et al., 2017; Slowiak & DeLongchamp, 2022).

While a significant negative relationship between Employee Self-Care and disengagement ($r = -.26$) was found, the difference in predicted variance between exhaustion ($R^2 = 0.29$) and disengagement ($R^2 = 0.11$) was noticeable. In past research, similar differences between the predicted variance of exhaustion and disengagement were seen. While those studies did not look at leader health orientation (Leader Staff Care) as a moderator, they did investigate the use of personal and social resources to mitigate job

burnout among ABA practitioners (Jay, 2021; Slowiak & DeLongchamp, 2022). Jay (2021) evaluated work demands as a predictor of burnout, along with social job resources (supervisor and coworker support) and personal resources (psychological flexibility) as potential moderators. Slowiak & DeLongchamp (2022) looked at self-care and job crafting as predictors of burnout (personal and social job resources). Both studies led to differing amounts of predicted variance between exhaustion and disengagement, but no speculation as to the differences was offered. While predicted variances may have been influenced by scale reliability (particularly in the case of disengagement), we contend alternative explanations exist.

High job demands (e.g., heavy workloads, long hours) have been reported in the field of ABA (Dounavi et al., 2019; Gibson et al., 1989; Jay, 2021; Tham & Meagher, 2009) and are especially prominent among those in human services professions. High job demands have been identified as a predictor of higher levels of burnout (Dounavi et al., 2019; Jay, 2021), and there are ways both components of burnout can be mitigated. In developing their conceptualization of burnout, Demerouti et al. (2001) stated that job demands (e.g., heavy workload) should be the primary predictor of exhaustion, and job resources (e.g., job control) should primarily predict disengagement. Bottini and colleagues (2020) reported that one's values, alone, predicted disengagement, while workload, fairness, and values predicted exhaustion. As such, personal resources (e.g., Employee Self-Care) may be used to mitigate the negative consequences associated with workload, in turn, decreasing exhaustion. That said, using Employee Self-Care to mitigate the negative consequences associated with high job demands may help explain

the discrepancy in predicted variance between the two components of burnout (exhaustion, disengagement) and Employee Self-Care.

Relatedly, in reviewing items within the OLBI disengagement scale, questions such as “Lately, I tend to think less at work and do my job almost mechanically” and “Over time, one can become disconnected from this type of work” are included. According to Demerouti and colleagues (2001), these questions represent disengagement from one's work. Disengaged employees have been labeled as “checked out” (Seijts & Crim, 2006) or “going through the motions” (French-Bravo & Crow, 2015). However, the BCBA (n.d.) states that interventions conducted by ABA practitioners involve an intense and comprehensive understanding of clients’ behaviors in order treat concerns. As such, the nature of work for ABA practitioners working directly with clients may preclude being “checked-out” and disengaged. This may, therefore, explain the lower level of variance predicted in disengagement by Employee Self-Care.

In 2009, Gibson et al. found that 27% of ABA practitioners reported high levels of emotional exhaustion, a component of burnout. In 2018, Plantiveau et al. reported that two-thirds of their sample of ABA practitioners experienced high levels of burnout. While both studies were conducted using the MBI (Maslach et al., 1996) to evaluate burnout, similar trends of increasing burnout levels have been found in research using the OLBI (Demerouti et al., 2010). Slowiak and DeLongchamp (2022) found that 72% of ABA practitioners reported moderate to high levels of burnout. In data collected later, Jay (2021) reported an even higher 87.25% of ABA practitioners reported moderate to high levels of burnout (Jay, 2021). Similarly, the majority of this study’s sample reported high ($n$ = 21, 15.3%) to moderate ($n$ = 100, 73%) levels of burnout; low levels of burnout ($n$ =

16, 11.7%) were the least reported. With 88.3% of this study's sample experiencing moderate to high burnout, it is evident that we continue to see an increasing trend in job burnout among those working within the human services area of ABA.

Contrary to what was expected, having a health-oriented leader (Leader Staff Care) did not moderate (strengthen) the negative relationship between Employee Self-Care and burnout in the current study. Previous research had not used Leader Staff Care as a moderator, and our findings differ from what was expected considering the job-demands resource model (Bakker & Demerouti, 2007). While Leader Staff Care—with all three components—was not a significant moderator, the exploratory moderation analyses that evaluated individual components of Leader Staff Care suggest the influence of *behavior* was stronger that values and awareness. Results within the current study may have been impacted by sample size and power. The sample size of the current study led to the observed power of the moderation analysis to be between 7% and 25%. We may have seen a more impactful result if we had a larger sample with more usable data.

Independently, however, Leader Staff Care did predict significantly lower levels of disengagement and exhaustion among ABA professionals. These results are congruent with findings of previous research showing that Leader Staff Care was negatively correlated with burnout (Santa Maria et al., 2021). Recent research has shown that leaders who engage with their employees in a meaningful way have a positive impact on employees' psychological and physical well-being (Franke et al., 2014; Kaluza et al., 2020; Kranabetter & Niessen, 2017; Vincent-Höper & Stein, 2019). For example, Mazzetti and Schaufeli (2022) found that inspiring leader engagement increases job and

personal resources, resulting in employee engagement. In other words, when a leader is actively engaging in positive behavior, an increase in employee engagement is observed.

**Limitations and Strengths**

While human services professions are often referenced in the burnout literature, this study looked at a convenience sample of ABA practitioners which may limit study generalizability. The methods in which the survey was disseminated resulted in convenient recruitment, and the use of BACB mass email service allowed distribution of the recruitment message to all certified behavior analysts who opted in to receiving mass emails. A follow-up email via the mass email service was used, and recruitment via postings on professional social media accounts and groups provided a no-cost and alternative method of reaching eligible participants. Generalizability may be increased through obtaining a larger, more diverse sample (e.g., all human services professions).

Relatedly, the use of self-report measures could have impacted the results and the generalizability of the results. In considering the concept of Employee Self Care, participants may fall victim to the social desirability bias. Specifically, participants may have over-reported their self-care values, awareness, and behaviors if they believe valuing and engaging in self-care behaviors is desirable to others (Sallis & Saelens, 2000). Similarly, recalling behavior is a highly complex cognitive task (Sallis & Saelens, 2000), and accurate responding can be impacted by participants' perceptions of what was being asked. For example, participants may not have shared a similar understanding of the terms "relaxation and recovery", in turn, affecting the results.

Survey fatigue is another potential limitation of the current study. Survey fatigue is known as tiredness associated with the survey one is conducting or has conducted in the past leading to lower response rates (de Koning et al., 2021). Since the beginning of the COVID-19 pandemic, many surveys have been administered to help researchers and practitioners understand human behavior changes (Jay, 2021). In 2021, a study was conducted to assess survey fatigue among professionals practicing neurosurgery. This study revealed that a rise in surveys distributed during the COVID-19 pandemic has led to reduced response rates and poor data quality (de Koning et al., 2021).

Another limitation of this study is that work environment factors with the potential to influence Leader Staff Care and Employee Self-Care (e.g., processes/work flow, administrative task burden, autonomy, job setting) were not evaluated. Correlational analyses revealed relationships between each of the dimensions of burnout (i.e., exhaustion, disengagement) and the size of the workplace, the opportunity to supervise first-year BCBA practitioners, and whether course work was being completed at the time of survey completion. These and other organizational variables may have impacted the results and should be considered as potential covariates in future analyses.

One notable strength of this study is the assessment of all three components (i.e., values, awareness, behaviors) of self- and follower-directed health-oriented leadership (Employee Self-Care and Leader Staff Care, respectively). Research on health-oriented leadership (HoL) is limited, and it is not unusual for researchers to evaluate single components (e.g., Kaluza et al., 2021; Krick et al., 2022). With the assessment of values, awareness, and behaviors, we were able to explore the unique contributions of these components on burnout. While health *behavior* may be the most directly observable

component of HoL and the one that makes the most impact on burnout, employees' health values and health awareness also predicted reduced levels of exhaustion and disengagement. This was evident within the exploratory analyses that evaluated the relationship between Employee Self-Care and both dimension of burnout.

**Implications for Future Research and Employers of ABA Professionals**

The findings of this research provide implications for future researchers and employers of ABA professionals. In future research, to allow for more meaningful statistical results and to increase overall generalizability, widening the demographic to incorporate all human services professionals may be helpful. While the observed power for our moderation analysis was low, increasing the number of participants may allow for a more accurate representation of the relationship between Employee Self-Care, Leader Staff Care, and burnout.

To further explore the benefits of HoL as a way to lessen burnout, researchers may choose to examine Employee Self Care as a mediator between Leader Staff Care and burnout. Leader Staff Care has been shown to be positively associated with Employee Self-Care (Kaluza et al., 2021) and, in the current study, Employee Self-Care was negatively associated with burnout. Leaders that practice a HoL style may be able to help their employees improve their self-care practices, leading to decreased burnout. Relatedly, researchers may also consider further investigating the individual contributions of all three Employee Self-Care and Leader Staff Care components within HoL measures.

The positive relationship between Employee Self-Care and burnout suggests that employers should encourage employees to be aware of, value, and practice self-care throughout the day. For example, an organization may take action to ensure practitioners

are not overcommitted within their role, as this allows more time for self-care (Franke et al., 2014). Self-care has been seen to decrease irritation, as well as lead to fewer health complaints and work-family conflicts (Franke et al., 2014). While the health and well-being of ABA practitioners are important, practicing self-care will also allow practitioners to better serve their clients knowing that organizational processes are sound and their personal needs are met (Simionato et al., 2019).

Though findings of the current study did not provide support for hypothesis 2, Leader Staff Care was negatively associated with burnout. Leader Staff Care is said to be an extension of transformational leadership with an emphasis on leader and employee health (Franke et al., 2014). Understanding HoL allows practitioners and researchers to better understand the specific leadership attributes that are most effective for organizational health and well-being (Franke et al., 2014). Given that research has shown the effectiveness of transformational leadership on employee well-being (Lyons & Schneider, 2009), we recommend employers include information and resources within current leadership training to support the development of heath-oriented leaders within their organization.

## Conclusion

As employers and employees increasingly recognize the importance of health and well-being, researchers and practitioners continue to expand upon ways to decrease the strain leading to job burnout. The results of this study suggest that interventions to improve employee self-care and promote a health-oriented leadership style may help to mitigate burnout among ABA professionals. Relatedly, human services professionals would likely benefit from learning to implement effective strategies to help reduce

exhaustion and disengagement within the workplace. Additional research is needed to inform the development of effective interventions to encourage leaders to be aware, value, and behave in a health-oriented way. Due to the current lack of health-oriented leadership-specific interventions, organizations may consider integrating Employee Self-Care and Leader Staff Care within current leadership training. As an employer, supporting employee's engagement in self-care behaviors will likely help decrease burnout and improve retention and turnover within the industry. With employee health being a priority for many organizations, we will continue to value the increased focus on employee well-being and encourage further assessment of Employee Self-Care, Leader Staff Care, and burnout to better understand how they impact individual and organizational outcomes.

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# Appendix A

## RECRUITMENT MESSAGES

### Full Recruitment Message Disseminated via Email & Listservs

**Subject Line:** Request for Survey Participation: Health-Focused Leadership & Behavior Analyst Burnout

We are recruiting individuals to participate in a survey to gather information about how employee and leader health orientation influence well-being among applied behavior analysts. This study seeks to advance existing research and inform ways in which supervisors and leaders can support employee well-being in the behavior-analytic field.

To be eligible to participate, you must: (1) be 18 years of age or older, (2) be fluent in reading and understanding written English, (3) be currently employed in the field of behavior analysis, (4) be actively providing ABA services to clients, and (5) have a direct supervisor or clinical leader.

The survey includes sociodemographic and job-related items, as well as questions to gather information about your perceptions of your own and your supervisor/leader's health orientation, in addition to job-related burnout.

The survey will take approximately 20-30 minutes to complete, and your participation is voluntary. At the end of the survey, you will have the opportunity to be entered into the drawing for one of 25 $10 Amazon eGift Cards.

There are no foreseeable risks associated with participation, as no identifying information will be collected. This study has been reviewed by the University of Minnesota's Institutional Review Board and granted exemption from IRB review (IRB ID: STUDY00015774).

To participate in this voluntary survey, please use the following link: https://z.umn.edu/aba-burnout

The survey will remain open until **[insert date]**. If you have any questions about this study or issues accessing the survey, please email us directly.

Thank you,

Kalei Kleive, Candidate, M.A. Psychological Science
Affiliation: University of Minnesota Duluth, Department of Psychology
Email: kleiv006@d.umn.edu

Julie M. Slowiak, Ph.D., BCBA-D (Faculty Advisor)
Affiliation: University of Minnesota Duluth, Department of Psychology
Email: jslowiak@d.umn.edu

**Recruitment Messages Disseminated via Social Media**

Facebook, LinkedIn, Instagram

Are you currently employed in the field of behavior analysis, providing ABA services to clients, working with a direct supervisor or clinical leader, fluent in reading and understanding written English, and 18 years of age or older? If so, please consider taking our research survey to share your experience of working within the behavior-analytic field.

This study seeks to advance existing research and inform ways in which supervisors and leaders can support employee well-being in the behavior-analytic field. The survey will take approximately 20-30 minutes to complete, and your participation is voluntary. At the end of the survey, you will have the opportunity to be entered into the drawing for one of 25 $10 Amazon eGift Cards.

Feel free to share this post or the survey link below with others you know!

Survey Link: https://z.umn.edu/aba-burnout

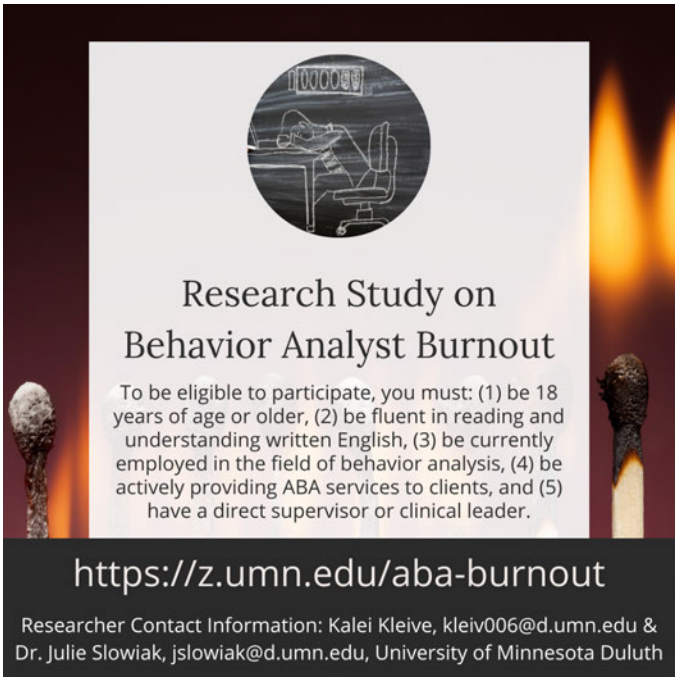
This research is being conducted out of the University of Minnesota Duluth, Psychology Department, by Kalei Kleive (kleiv006@d.umn.edu) and Julie M. Slowiak, Ph.D., BCBA-D (jslowiak@d.umn.edu). This study has been reviewed by the University of Minnesota's Institutional Review Board and granted exemption from IRB review (IRB ID: STUDY00015774).

Twitter (limit of 280 characters)

Participate in research about behavior analyst burnout and enter a drawing for one of 25 $10 gift cards. Read more: https://z.umn.edu/aba-burnout

Kalei Kleive, kleiv006@d.umn.edu & Dr. Julie Slowiak, jslowiak@d.umn.edu, University of Minnesota Duluth. IRB ID: STUDY00015774

**Social Media Pictures**




## Appendix B

## INFORMATION SHEET FOR RESEARCH & SCREENING ITEMS

### INFORMATION SHEET FOR RESEARCH

Health-Focused Leadership & Behavior Analyst Burnout

You are invited to be in a research study to understand how employee and leader health orientation influence well-being among applied behavior analysts. You were selected as a possible participant because you are at least 18 years of age, are fluent in reading and understanding written English, are currently employed in the field of behavior analysis, actively providing ABA services to clients, and have a direct supervisor or clinical leader. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Kalei Kleive, B.A. (Master's Candidate) and Julie M. Slowiak, Ph.D., BCBA-D, Department of Psychology, University of Minnesota Duluth.

**Procedures:** If you agree to be in this study, we will ask you to complete a survey questionnaire containing sociodemographic and job-related items, as well as questions about your perceptions of your own and your supervisor/leader's health orientation, in addition to job-related burnout. Completing the survey will take approximately 10-20 minutes.

**Confidentiality:** The records of this study will be kept private. In any sort of report we might publish or presentation of the findings, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records.

**Voluntary Nature of the Study:** Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

**Will I be compensated for my participation?** If you agree to take part in this research study, you will have the opportunity to be entered into a prize drawing. After completing the survey, you will see a link to a separate survey form that will allow you to enter an email address if you would like to be entered into the drawing for one of 25 $10 Amazon eGift Cards. The drawing will be conducted no later than September 1, 2022. The Principal Investigator will send the electronic gift card to each winner by the email provided.

**Contacts and Questions:** The researchers conducting this study are Kalei Kleive and Julie M. Slowiak, Ph.D., BCBA-D. You may email any questions that you have before

agreeing to participate. If you have questions later, **you are encouraged** to contact Julie M. Slowiak at the Department of Psychology, University of Minnesota Duluth, 218-726-7116, jslowiak@d.umn.edu.

This research has been reviewed and approved by an IRB within the Human Research Protections Program (HRPP). To share feedback privately with the HRPP about your research experience, call the Research Participants' Advocate Line at 612-625-1650 (Toll Free: 1-888-224-8636) or go to z.umn.edu/participants. You are encouraged to contact the HRPP if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research participant.
- You want to get information or provide input about this research.

**Statement of Consent**
You have read the information above and you have had the opportunity to ask any questions you have via email. By selecting "I consent to participate in this study" below, you are consenting to participate in this study.

- I consent to participate in this study.
- I do not want to participate in this study.

**Respondent selects "I do not want to participate in this study" → Survey ends**

**(Next Screen Page)**

Please confirm your decision to participate in this study:
- I confirm that I consent to participate in this study.
- Oops…never mind. I do not want to be a participant.

**Respondent selects "Oops…never mind. I do not want to be a participant." → Survey ends**

**SCREENING QUESTIONS (Q1-Q5)**

The following questions will appear after individuals consent to participate and before the primary survey items to ensure individuals meet the eligibility criteria. A response to Q1-Q4 will be required ("forced response") to proceed to the next survey item.

1. Are you 18 years of age or older?
    1. Yes
    2. No

**Respondent selects No → Survey ends**

2. Are you fluent in reading and understanding written English?
    1. Yes
    2. No

**Respondent selects No → Survey ends**

3. Are you currently employed in the field of behavior analysis?
    1. Yes
    2. No

**Respondent selects No → Survey ends**

4. Are you actively providing ABA services to clients?
    1. Yes
    2. No

**Respondent selects No → Survey ends**

5. Do you have a direct supervisor/leader to whom you report and from whom you receive required supervision or clinical support?
    1. Yes
    2. No

**Respondent selects No → Survey ends**

## Appendix C

## SURVEY ITEMS

### SOCIODEMOGRAPHIC & JOB-RELATED ITEMS (Q6-Q23)

**NOTE:** Survey items Q6-Q95 will not require a participant response. This means that the items will not be set up as "forced response", and participants will be able to skip over any items that they choose not to answer. Items with an asterisk (*) allow multiple answers to be selected.

1. What is your age in years? (Fill in the blank) _____

2. What sex were you assigned at birth, on your original birth certificate?
    a. Male
    b. Female
    c. Prefer Not to Answer

3. How do you currently describe yourself?
    a. Male
    b. Female
    c. Transgender
    d. None of these
    e. Prefer Not to Answer

4. Where are you located?
    a. North America
    b. South America
    c. Europe
    d. Africa
    e. Asia
    f. Oceania
    g. Prefer Not to Answer

5. Are you Hispanic or Latino? Select only one.
    a. Yes, Hispanic or Latino
    b. No, not Hispanic or Latino
    c. Prefer Not to Answer

6. How do you identify your race?* (Regardless of how you answered the previous item, select one or more)
    a. American Indian or Alaska Native
    b. Asian
    c. Black or African American
    d. Native Hawaiian or Other Pacific Islander

e. White
f. Prefer Not to Answer
g. Other, please specify: _____

7. How are you employed?*
    a. Self-Employed
    b. Private Sector Employee in for-profit company or organization
    c. Private Sector Employee in non-profit organization
    d. Government Employee
    e. Prefer Not to Answer

8. What is your primary area of professional emphasis/practice?
    a. Autism Spectrum Disorders
    b. Behavioral Gerontology
    c. Clinical Behavior Analysis
    d. Behavioral Pediatrics
    e. Brain Injury Rehabilitation
    f. Child Welfare
    g. Corrections & Delinquency
    h. Dissemination of Behavior Analysis
    i. Education
    j. Higher Education
    k. Intellectual & Developmental Disabilities
    l. Non-University Research
    m. Organizational Behavior Management
    n. Parent & Caregiver Training
    o. Professional Supervision
    p. Public Policy & Advocacy
    q. Health, Sport & Fitness
    r. Prefer Not to Answer

9. In what setting(s) do you practice applied behavior analysis?*
    a. ABA Clinic or Center
    b. Home-Based
    c. Remote/Telehealth
    d. Residential Care
    e. School
    f. Other (Fill in the blank) _____
    g. Prefer Not to Answer

10. What is your ***current*** level of certification?
    a. RBT
    b. BCaBA
    c. BCBA
    d. BCBA-D
    e. None; working toward certification

f. Prefer Not to Answer

11. Are you **currently** ***completing coursework*** to meet the requirements for certification as a BCaBA or BCBA?
    a. Yes
    b. No
    c. Prefer Not to Answer

12. Are you **currently** ***receiving required supervision*** while accruing fieldwork toward BCBA and BCaBA certification?
    a. Yes
    b. No
    c. Prefer Not to Answer

13. Are you **currently** ***providing supervision*** to RBTs or BCaBAs?
    a. Yes
    b. No
    c. Prefer Not to Answer

14. Are you **currently** ***providing consultation*** to first-year BCBAs who are providing supervision to trainees accruing fieldwork toward BCBA and BCaBA certification?
    a. Yes
    b. No
    c. Prefer Not to Answer

15. How many years have you been certified?
    a. Not yet certified
    b. Less than 1 year
    c. 1-2 years
    d. 3-4 years
    e. 5-10 years
    f. More than 10 years
    g. Prefer Not to Answer

16. Counting all locations where your employer (or supervision site) operates, what is the total number of persons who work there?
    a. 1 employee (self-employed; independent contractor)
    b. 2 – 4 employees
    c. 5 – 9 employees
    d. 10 – 19 employees
    e. 20 – 49 employees
    f. 50 – 99 employees
    g. 100 – 249 employees
    h. 250 – 499 employees
    i. 500 – 999 employees
    j. 1000 or more employees

k. Unsure
l. Prefer Not to Answer

17. How many certified professionals (RBTs, BCaBAs, BCBAs, BCBA-Ds) do you have on your team?
    a. Work alone
    b. 1-3
    c. 4-5
    d. 6-10
    e. More than 10
    f. Unknown
    g. Prefer Not to Answer

18. How many companies have you worked for over the past 5 years? (fill in the blank)

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**PARTICIPANT INSTRUCTIONS ASSOCIATED WITH ITEMS Q24 - 39**

**Oldenburg Burnout Inventory (OLBI)**
**INSTRUCTIONS:** In this section, you will see a series of statements with which you may agree or disagree. For each item, please rate the extent to which you agree with each statement. When responding, **please reflect on your work over the last 1 month, unless otherwise specified**.

**Strongly Disagree (4); Disagree (3); Agree (2); Strongly Agree (1)**

19. I always find new and interesting aspects in my work.
20. There are days when I feel tired before I arrive at work.
21. It happens more and more often that I talk about my work in a negative way.
22. After work I tend to need more time than in the past in order to relax and feel better.
23. I can tolerate the pressure of my work very well.
24. Lately, I tend to think less at work and do my job almost mechanically.
25. I find my work to be a positive challenge.
26. During my work, I often feel emotionally drained.
27. Over time, one can become disconnected from this type of work.
28. After working, I have enough energy for my leisure activities.
29. Sometimes I feel sickened by my work tasks.
30. After my work, I usually feel worn out and weary.
31. This is the only type of work that I can imagine myself doing.
32. Usually, I can manage the amount of my work well.
33. I feel more and more engaged in my work.
34. When I work, I usually feel energized.

## PARTICIPANT INSTRUCTIONS ASSOCIATED WITH ITEMS Q40-64

**Employee Self Care (Self-Directed Health-oriented Leadership)**

**INSTRUCTIONS:** The following statements describe how you deal with features of your work and conditions at your workplace that might be relevant for your health. These include threats or risks for your physical health (e.g., infections, injuries, postural defects), as well as your mental health (e.g., stress, burnout, psychosomatic complaints, etc.). Health risks are, for example, physically hard work, contact with hazardous materials, unbalanced body posture, noise but also high levels of time pressure, conflicts at work, contact with difficult customers, and low levels of decision latitude.

For each item, please rate the extent to which each statement is true. When responding, **please reflect on your work over the last 1 month, unless otherwise specified**.

**Not At All True (1); Slightly True (2); Somewhat True (3);**
**Moderately True (4); Completely True (5)**

35. I immediately notice when something is wrong with my health.
36. I notice in due time when I need a break for recovery.
37. I realize when I reach my personal health limits.
38. I often notice too late when I am expecting too much of myself.
39. I often do not notice when I overstretch my capabilities.
40. I know the health risks of my work and at my workplace very well.
41. I know the situations that get me particularly stressed.
42. I consciously pay attention to alarming health signals.
43. In making important decisions, I consider their meaning for my health.
44. It is important for me to reduce health risks at my workplace.
45. My health is my first priority.
46. I pursue a healthy lifestyle (e.g., eating healthy food, avoiding tobacco use, engaging in physical activity, playing sports).
47. I do a lot for my health in my free time.
48. I see to it that I have enough time for relaxation and recovery.
49. When I have had stress for a longer period of time, I attempt to gradually slow down again.
50. I regularly keep myself informed about safety rules and worksite health promotion activities.
51. Even when faced with high time pressure, I follow the safety rules.
52. I use the suggestions from worksite health promotion (e.g., back exercises, relaxation, stress management).
53. I try to reduce my demands by optimizing my personal working procedures (e.g., set priorities, make sure that there is time for undisturbed working, daily planning).
54. I try to reduce my demands by optimizing my working conditions (e.g., avoid unbalanced body-posture, arrange for enough workspace, avoid uncomfortable air circulation in the office).

55. I try to reduce my demands by optimizing my personal work-life balance (e.g., take regular breaks, avoid overtime, no work on the weekend, avoid the expiration of vacation time).
56. I see to it that I have enough support when I need it.
57. In my job, it happens again and again that I take too little consideration of my health.
58. Time and again, I expect too much of myself at work.
59. If there is a lot of work to do, I sometimes skip my breaks.

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**"PREP" QUESTION FOR FINAL SECTION**

60. For the items in the next (final) section, you are asked to rate your **supervisor/leader**. Please read the descriptions below and select the one that best describes the supervisor/leader for whom you will rate while responding to the items in the next section.

    a. **REQUIRED SUPERVISOR:** This is a supervisor who is required (e.g., through the BACB® and/or a licensure board) to directly oversee your work and provide training, feedback, and support. This is most applicable for trainees, RBT®s, and BCaBA®s.

    b. **CLINICAL LEADER (SUPPORTING SUPERVISOR):** This is a leader/supervisor at your place of work to whom you report and to whom you go to for clinical support.

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**PARTICIPANT INSTRUCTIONS ASSOCIATED WITH ITEMS Q66 - 95**

**Leader Staff Care (Follower-Directed Health-oriented Leadership)**

**INSTRUCTIONS:** The following statements describe how your "**supervisor" (i.e., Required Supervisor or Clinical Leader)** deals with features of your work that might be relevant for your health. These include threats or risks for your physical health (e.g., infections, injuries, postural defects) as well as your mental health (e.g., stress, burnout, psychosomatic complaints, etc.). Health risks are for example physically hard work, contact with hazard materials, unbalanced body- posture, noise but also high levels of time pressure, conflicts at work, contact to difficult customers, and low levels of decision latitude.

For each item, please rate the extent to which each statement is true. When responding, **please reflect on your work over the last 1 month, unless otherwise specified**.

**Not At All True (1); Slightly True (2); Somewhat True (3);**
**Moderately True (4); Completely True (5)**

61. My supervisor immediately notices when something is wrong with my health.
62. My supervisor notices in due time when I need a break for recovery.

63. My supervisor realizes when I arrive at my personal health limits.
64. My supervisor often notices too late when he/she is expecting too much of me.
65. My supervisor often does not notice when he/she overstretches my capabilities.
66. My supervisor knows the health risks of my work and at my workplace very well.
67. My supervisor knows the situations that get me particularly stressed.
68. My supervisor consciously pays attention to my alarming health signals.
69. My health is important to my supervisor.
70. It is important for my supervisor to reduce health risks at my workplace.
71. My supervisor feels responsible to support my health.
72. My supervisor is not willing to risk my health for work.
73. My supervisor supports my efforts to develop and maintain a healthy lifestyle (e.g., eating healthy food, avoiding tobacco use, engaging in physical activity, playing sports).
74. My supervisor motivates me again and again to do a lot for my health in my free time.
75. My supervisor sees to it that I have enough time for relaxation and recovery.
76. When we have had stress for a longer period of time, my supervisor attempts to gradually slow down again.
77. My supervisor invites me to inform him/her about health risks at my workplace.
78. My supervisor regularly keeps us informed about safety rules and worksite health promotion activities.
79. Even when faced with high time pressure, my supervisor encourages me to follow the safety rules.
80. When I seem to be stressed, my supervisor notices and tries to propose solutions.
81. When my supervisor is under the impression that someone is ill, he/she sends this person to the doctor or home.
82. My supervisor makes sure that the topic of health is not left out in our team.
83. My supervisor encourages me to use the suggestions from worksite health promotion (e.g., back exercises, relaxation, stress management).
84. My supervisor tries to reduce my demands by optimizing my working procedures (e.g., sets priorities, makes sure that there is time for undisturbed working, daily planning).
85. My supervisor tries to reduce my demands by optimizing my working conditions (e.g., avoid unbalanced body-posture, arrange for enough workspace, avoid uncomfortable air circulation in the office).
86. My supervisor tries to reduce my demands by optimizing my work-life balance (e.g., take regular breaks, avoid overtime, avoid the expiration of vacation).
87. By fostering a positive interaction with one another, my supervisor sees to it that my demands are reduced.
88. In my job, it happens again and again that my supervisor takes too little consideration of my health.
89. Time and again, my supervisor expects too much of me.
90. If the team has a lot of work to do, sometimes breaks have to be skipped.

**END OF SURVEY MESSAGE**

Thank you for your participation. Your responses have been recorded.

For general information on job burnout, please read the Mayo Clinic's (2018) article, Job Burnout: How to Spot It and Take Action. You are encouraged to contact your employee health or employee assistance program should you feel they need additional support after completing the survey questions.