



Self-Care Strategies and Job-Crafting Practices Among Behavior Analysts: Do They Predict Perceptions of Work–Life Balance, Work Engagement, and Burnout?

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Abstract

Applied behavior analysis (ABA) practitioners report high levels of burnout, exhibited as exhaustion and disengagement. Turnover, a stressful and costly experience for individual practitioners and the human service organizations that employ them, is a potential consequence of burnout. Work–life balance and work engagement are associated with lower burnout and lower intention to quit. Research concerning behavioral predictors of work–life balance, work engagement, and burnout—all of which are associated with turnover intentions—among ABA service providers is scant. Therefore, the purpose of the current study was to explore whether and how the use of self-care strategies and job-crafting practices influences perceived levels of work–life balance, work engagement, and burnout among ABA practitioners who work in human service settings. In a sample of 826 ABA practitioners, 72% reported medium to high levels of burnout. Hierarchical regression analyses revealed that the use of both self-care strategies and job-crafting practices strongly predicted work–life balance, work engagement, and burnout above and beyond sociodemographic variables (gender and years of experience). Findings can inform the development of effective organizational/ systems- and individual-level self-care and job-crafting interventions that support sustainable individual, organizational, and client-related outcomes. We contend that self-care and job-crafting interventions support a culture of well-being in graduate programs, training/supervision curricula, and mentor–mentee relationships.

Keywords burnout · job crafting · self-care · work engagement · work · life balance

According to the most recent *US Employment Demand for Behavior Analysts* report, annual demand for Board Certified Behavior Analysts (BCBAs) increased 3,571.36% from 2010 to 2019 and 80% from 2018 to 2019 (Behavior Analyst Certification Board [BACB], 2020). The demand for Board Certified Assistant Behavior Analysts (BCaBAs) has followed a similar trend, increasing 51,490.91% from 2010 to 2019 and 157% from 2018 to 2019. Although the data suggest that behavior analysts will continue to have high levels of job security, the data fail to illustrate the impact of these demands on the organizations that employ behavior analysts and the direct and indirect effects on behavior analysts themselves. For example, high demands for human services work may

place a great deal of pressure on employers to provide services to significantly more clients than for which they have the capacity. Employers may face the choice to turn away business and money or to assign a larger caseload to their staff and ask staff to take on cases outside of their scope of competence (Brodhead et al., 2018). The latter choices are violations of the Behavior Analyst Certification Board's *Professional and Ethical Compliance Code for Behavior Analysts* (hereafter referred to as the BACB Ethics Code; BACB, 2014).

Effects of High-Demand and Limited-Support Work Environments

At the employee level, high job demands (e.g., heavy workload, role overload) coupled with insufficient job-supportive resources (e.g., training, feedback, and supervisor/coworker support) can lead to physical and mental exhaustion. Results from the *2018 Work and Well-Being Survey* revealed that 35%

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of working Americans reported experiencing chronic work stress; only 41% indicated that their employer provides sufficient resources to help manage stress (American Psychological Association [APA], 2018). In that survey, the top five reported work-related stressors included low salaries, lack of opportunity for growth or advancement, too heavy a workload, unrealistic job expectations, and long hours (APA, 2018).

Left unattended, work-related stressors can lead to burnout. Demerouti et al. (2010) described burnout as a “psychological syndrome,” characterized in the workplace by disengagement (i.e., detaching oneself from work, reducing one’s identification with the organization, increased turnover intent) and exhaustion (i.e., extreme fatigue, lack of mental and physical energy). Burnout results from prolonged, intensive physical, affective, and mental strains to particular job demands (e.g., imbalance between available resources and job demands, persistent interpersonal conflicts, a clash between role demands and one’s personal preference; Maslach & Leiter, 2016). Among applied behavior analysis (ABA) practitioners, Plantiveau et al. (2018) found that approximately every two out of three surveyed reported experiences of moderate to high levels of burnout and minimal job satisfaction. These findings contradict previous research that suggested burnout occurred at low levels among ABA therapists (Gibson et al., 2009; Griffith et al., 2014; Jennett et al., 2003). The differences between the studies could be due to work settings, levels of social support, services provided, and supervision provided (Plantiveau et al., 2018).

Organizations appear to be aware of the impact of job demands on employees, as 46% of human resource leaders reported that they believe employee burnout is responsible for workforce turnover (Hakanen & Bakker, 2017; Kronos Incorporated & Future Workplace, 2016). Although the link between burnout and turnover in the field of behavior analysis is not established (Wine et al., 2020), research demonstrates an association between burnout and turnover intentions (e.g., Kozak et al., 2013). Employee turnover is a stressful event for employees and employers because it can lead to substantial direct and indirect costs for an organization. Costs associated with recruiting, hiring, and training new employees can vary widely, and they can amount to as much as 200% of 1 year’s salary (Lee et al., 2018). Salaries¹ for ABA service providers reportedly range from approximately \$34,050 to \$39,100 for direct reports and roughly \$67,200 to \$83,100 for supervisors; thus, the average turnover costs per individual employee could be as high as \$166,200. In 2018, the average turnover rate for direct care staff was 48% (Behavioral Health Center of Excellence [BHOCE], 2018). Among a sample of behavior

technicians, 38% reported they would likely leave their job (Kazemi et al., 2015), which is almost double the turnover intent of the general workforce population (17.9%; Boushey & Glynn, 2012). Self-reported satisfaction with supervision, pay, training, coworkers, and working conditions accounted for 38% of the variance in the sample’s turnover intent (Kazemi et al., 2015).

In their review, Novack and Dixon (2019) shed light on organizational and job factors that might reduce burnout and turnover intent (i.e., hours, training, supervision, pay, job demands) among behavioral technicians and possibly other practitioners within the field of ABA. Work engagement, also referred to as employee engagement, is another protective factor identified in the extant literature (Schaufeli et al., 2019). Work engagement represents the level of emotional and intellectual commitment toward an organization’s values (Anitha, 2014; Saks, 2006). Schaufeli et al. (2002) proposed that work engagement is composed of high levels of vigor, dedication, and absorption, giving employees high levels of energy and persistence despite obstacles, a sense of enthusiasm and pride, and full concentration in work tasks. Employee engagement is associated with improved employee performance, job satisfaction, and commitment to the organization and reduced intention to quit (Anitha, 2014; Saks, 2006).

Research concerning behavioral predictors of work–life balance, work engagement, and burnout, all of which are associated with turnover intentions, is scant among ABA service providers. Therefore, this research considered valuable contributions from other fields with better developed tools and vocabulary to describe the variables that affect work–life balance, work engagement, and burnout. Specifically, this study explored self-care strategies and job-crafting practices; the following sections describe both in detail. Understanding the impact of these individual-focused and organizational-supported strategies on facets of behavior analysts’ well-being is critical to ensuring sustainable individual, organizational, and client-related outcomes. We contend that findings from this research can inform interventions to reduce burnout and exhaustion, improve overall well-being and job satisfaction, and ultimately reduce turnover intentions among this professional demographic.

Self-Care

The literature on self-care reveals numerous ways of conceptualizing, discussing, and defining self-care. As a result, researchers in human service fields (e.g., social work and psychology) have more recently focused on developing an applied framework and comprehensive self-care measure to provide guidelines for human service practitioners (Dorociak et al., 2017; Lee & Miller, 2013). Lee and Miller (2013) proposed a comprehensive framework that included personal *and*

¹ Salaries were calculated based on the averages given by BHOCE (2018, pp. 18 and 20) by multiplying the lowest and highest of each employee group by 40 (hours) and multiplying that value by 52 (weeks).

professional self-care, as research supports a distinction and interaction between the two. In their framework, Lee and Miller proposed that personal and professional self-care includes intentional actions; personal self-care focuses on those actions taken to care for one's health and well-being, and professional self-care consists of those actions that "promote effective and appropriate use of the self in the professional role within the context of sustaining holistic health and well-being" (p. 98).

Dorociak et al. (2017) used Lee and Miller's (2013) framework to define specific behavioral strategies that fall within the realm of self-care and to develop a measure to assess self-care. Self-care is defined as "a multidimensional, multifaceted process of purposeful engagement in strategies that promote healthy functioning and enhance well-being" (Dorociak et al., 2017, p. 326). Dorociak et al. used exploratory factor analysis to identify five self-care dimensions within which behavior-focused strategies can be assessed: professional support, professional development, life balance, cognitive awareness, and daily balance. What follows is a brief description of each dimension; taken together, they encompass behaviors across personal and work domains, adding support to the known interaction between work and nonwork.

Professional Support

Professional support describes any source that aids employees facing job-related stressors and motivates them to collaborate with others in various ways (e.g., seeking out supervision, mentoring, or peer consultation; Acker, 2004; Newell & Nelson-Gardell, 2014). Research suggests that individuals at risk for feeling isolated, either socially or professionally, as well as those who endure high demands and stress, will especially benefit from professional support (Acker, 2004; Wilberforce et al., 2014). As such, behavioral strategies related to this dimension of self-care serve the purpose of helping develop and strengthen relationships among colleagues (Dorociak et al., 2017). Acker (2018) found that professional development has a statistically significant low positive correlation with job satisfaction and a low negative correlation with turnover intention.

Professional Development

Professional development includes activities associated with continued training and education to support activities that fall within one's scope of practice and further develop one's scope of competence. Brodhead et al. (2018) defined *scope of competence* as "the range of professional activities of the individual practitioner that are performed at a level that is deemed proficient" (p. 425). Participating in professional development activities allows practitioners to stay current on knowledge in their field and can include completing

continuing education activities (often necessary to maintain one's professional license or certification) and attending presentations, training, or workshops (inside or outside the organization), as well as obtaining supervision or consultation from a more experienced professional (Acker, 2018; Brodhead et al., 2018; Dorociak et al., 2017). As self-care strategies, professional development activities should be enjoyable, include professional and work-related social and community events, and assist with staying up to date on knowledge and current practices (Dorociak et al., 2017). Although the relationship between professional support and well-being outcomes, such as burnout, has yielded inconsistent findings in the literature (e.g., Rupert et al., 2015), Acker (2018) did find a statistically significant low positive correlation between professional support and job satisfaction.

Life Balance

As a dimension of self-care, life balance emphasizes the importance of having an identity outside of one's work, engaging in enjoyable activities, and building sources of social support and connection outside of work (Dorociak et al., 2017). Strategies within the life balance dimension serve to foster work–life balance, which describes "one's ability to achieve and maintain a 'balance' or equilibrium between one's paid work and life outside work, whatever 'life' involves for the individual" (Smeltzer et al., 2016, p. 6). Satisfactory perceptions of work–life balance are related to high job performance, low levels of burnout, high ratings of life satisfaction, and low anxiety (Shanafelt et al., 2015; Sirgy & Lee, 2018).

Cognitive Awareness

Strategies that include self-monitoring, self-exploration, and self-reflection may increase one's cognitive awareness (Acker, 2018; Dorociak et al., 2017). As a dimension of self-care, cognitive awareness strategies aim to increase and maintain self-awareness of feelings, emotions, and needs, as well as effective and maladaptive ways of reacting to negative experiences in the workplace. Rupert and Dorociak (2019) contended that the use of cognitive awareness strategies may help individuals maintain positive feelings and a sense of personal accomplishment during stressful times.

Daily Balance

Daily balance strategies consist of smaller self-care actions (e.g., taking breaks throughout the workday, avoiding overcommitting to work responsibilities) integrated into one's workday. The purpose of these strategies is to help employees manage daily job hassles through maintaining awareness and obtaining job-supportive resources when necessary (Dorociak et al., 2017). Recent research suggests that strategies

associated with life balance, cognitive awareness, and daily balance may be critical in lowering stress and emotional exhaustion associated with burnout (Dorociak et al., 2017; Rupert & Dorociak, 2019).

Self-Care and Ethical Practice

Although the focus of the current research is not directly tied to ethics, we contend that the evaluation of self-care strategies has important implications related to the ethical practice of ABA professionals. Barnett et al. (2007) argued that failing to take care of oneself and one's well-being may set up conditions that support behavior that negatively impacts oneself, one's clients, and one's profession. Section 1.05f of the BACB Ethics Code states, "Behavior analysts recognize that their personal problems and conflicts may interfere with their effectiveness. Behavior analysts refrain from providing services when their personal circumstances may compromise delivering services to the best of their abilities" (BACB, 2014, p. 5).

Therefore, engaging in self-care behaviors is likely to benefit one's well-being *and* support one's ability to effectively carry out one's work. Recent research suggests that self-care impacts well-being outcomes through reductions in stress, and lower levels of stress predict lower levels of burnout (Rupert & Dorociak, 2019). As such, we assert that ABA practitioners should recognize self-care as something necessary to properly adhere to their professional ethics code.

Job Crafting

Job crafting is a job-redesign strategy that focuses on how employees change certain aspects of their jobs in response to job demands (Bakker & Demerouti, 2007). Simply stated, employees engage in job crafting when they alter or tweak on-the-job behaviors. Tims et al. (2012) used exploratory factor analysis to identify four dimensions of job crafting: (a) increasing social job resources (e.g., asking coworkers for feedback on job performance), (b) increasing structural job resources (e.g., participating in professional development opportunities), (c) increasing challenging job demands (e.g., volunteering for new tasks or projects), and (d) decreasing hindering job demands (e.g., participating in projects that are not emotionally or mentally intense when possible). Employees at any level of an organization can use job crafting and tailor it to fit their individual needs (Berg et al., 2010; Rudolph et al., 2017). Support and encouragement from leaders can facilitate employee engagement in job-crafting behaviors. For example, leaders can demonstrate support and encouragement by creating a climate of trust, providing employees with resources, and explaining how the employee helps the organization reach its goals (Wang et al., 2016).

Wrzesniewski and Dutton (2001) originally defined job crafting within three dimensions: cognitive crafting, relational crafting, and task crafting. Cognitive crafting entails reframing perceptions of one's work to view it as more meaningful. Relational crafting may consist of engaging in more or fewer workplace relationships, such as working more often on teams or individually. Last, task crafting may include adding more tasks or changing the nature of one's tasks (when feasible) to engage in activities or projects the employee is more interested in pursuing (Berg et al., 2010). Despite conceptualizing job crafting differently, Wrzesniewski and Dutton (2001) and Tims et al. (2012) each found that job crafting (operationalized in their respective ways) led to the same positive outcomes, such as increased job satisfaction and task performance and decreased burnout (Zhang & Parker, 2019).

The dimensions of job crafting—regardless of conceptualization—are based on the Job Demands–Resources (JD-R) model, which proposes that every job has two types of factors that contribute to job stress: job demands and job resources (Bakker & Demerouti, 2007). Examples of job demands include role overload, work pressure, and the physical or emotional intensity of the job; examples of job resources include leader/coworker support, performance feedback, and autonomy. An additional premise of the JD-R model is that two dual processes are involved in the development of job strain and motivation: a health impairment process and a motivational process (Bakker & Demerouti, 2007). Health impairment (e.g., disengagement, exhaustion) occurs when job demands overwhelm the available resources and lead to unfavorable organizational outcomes (e.g., absenteeism, turnover). The motivational process occurs when job resources are sufficient, thereby reducing the negative implications associated with the demands of one's job and leading to positive organizational outcomes (e.g., high job performance, high work engagement; Bakker & Demerouti, 2007).

Despite limited research on the relationship between job crafting and work–life balance, evidence suggests that job crafting positively impacts work–life balance because job crafting has demonstrated a positive predictive relationship to subjective well-being. Both work–life balance and subjective well-being are embodied by life satisfaction (satisfaction in work, family, and recreation; Fouché & Martindale, 2011). Sturges (2012) interviewed employees to assess their current use of job crafting to improve their work–life balance and found that most employees unintentionally used as many as eight or nine job-crafting techniques to create a balance between work and life. The most common job-crafting practices reported included framing and defining work–life balance in a personal and meaningful way (i.e., cognitive crafting), using professional and personal relationships to support work–life balance (i.e., relational crafting), and being mindful of work-day length and the types of tasks completed (i.e., task crafting; Sturges, 2012).

Job-crafting interventions typically involve a broad focus related to a wide variety of crafting behaviors within multiple job-crafting dimensions (Tims et al., 2012). Job-crafting interventions are associated with different facets of employee well-being, such as higher levels of work engagement (e.g., Gordon et al., 2018), lower levels of exhaustion (e.g., Hakanen et al., 2017), and higher levels of basic need satisfaction (i.e., the need for autonomy, competency, and belonging; van Wingerden et al., 2017a). In nonintervention literature, job crafting also has shown a positive relationship to well-being (Yepes-Baldó et al., 2018) and work–life balance (Fouché & Martindale, 2011). Therefore, we expect that high levels of job crafting will improve work–life balance and work engagement and reduce burnout.

In sum, the present research explored the relationships between self-care strategies and job-crafting practices with work–life balance, work engagement, and burnout among ABA practitioners who work in human service settings. Specifically, this study evaluated four hypotheses. First, we hypothesized self-care strategies, individually and collectively, are positively associated with perceptions of work–life balance and work engagement and negatively associated with burnout. Second, we hypothesized that job-crafting practices, individually and collectively, are positively associated with perceptions of work–life balance and work engagement and negatively associated with burnout. Third, we hypothesized that self-care strategies, collectively, are a positive predictor of work–life balance, work engagement, and burnout after controlling for sociodemographic variables (gender and years of experience). Specifically, an increased frequency of using self-care strategies leads to higher levels of work–life balance and work engagement and lower levels of burnout. Finally, we hypothesized that job-crafting practices, collectively, predict work–life balance, work engagement, and burnout after controlling for sociodemographic variables (gender and years of experience). Specifically, an increased frequency of using job-crafting practices leads to higher levels of work–life balance and work engagement and lower levels of burnout.

Method

Participants

Participants were ABA practitioners who self-identified at the time of their participation as actively providing services to clients. The sample included students in ABA or ABA-related educational programs and those with relevant professional credentials (i.e., Registered Behavior Technician, BCaBA, BCBA, BCBA-Doctoral). Potential participants self-identified via recruitment emails and posts disseminated to relevant professional organizations, Listservs, and social media pages.

A convenience sample of 898 ABA practitioners consented to participate in the study. Of these, 71 participants did not begin study measures. We removed data for one participant from analyses because the individual answered the first item of the first study measure and then ceased responding. The final sample size of 826 participants reflects individuals who completed the first study measure in its entirety. The sample size for individual analyses differed depending on the number of survey items completed by each participant (see the Results section for specific details).

Table 1 shows the characteristics of the sample. All participants ($n = 826$) responded to all demographic questions except for age, employment type, setting, salary range, salary satisfaction, and certification. A majority of the sample identified as female (92.5%), working in North America (96.9%), being employed under contract (76.4%), working in two or more settings (35.4%), being satisfied with their salary (57.5%), and having the BCBA certification (71.7%).

Procedures

We disseminated a recruitment message via email to relevant professional organizations and Listservs and posted it on relevant social media pages and in relevant social media groups with the permission of the page owner or group administrator. The recruitment message included a description of the study, inclusion criteria, participant requirements, and a link to the web-based survey. We asked participants to complete a survey containing sociodemographic and job-related items, along with measures to assess self-care strategies, job-crafting practices, work–life balance, work engagement, and burnout (see Appendix A).

Participants accessed the study in Qualtrics via a link provided in an email or electronic (e.g., social media) posting. Participants read and electronically provided consent before proceeding to the survey items. Individuals might have experienced slight emotional discomfort if they perceived high levels of burnout or exhaustion associated with their work by responding to survey items. To minimize risks, we provided a statement encouraging participants to contact their employee health or employee assistance program administrator at the end of the survey for participants should they have felt the need for additional support after completing the survey questions. We also included a link to the Mayo Clinic's (2018) article on job burnout at the end of the survey.

Measures

Demographic Characteristics

The survey included 11 questions to obtain participant sociodemographic and job-related information, including gender, age, geographic location, education level, employment

Table 1 Sociodemographic and job-related characteristics of participants

Characteristics and Categories	<i>n</i>	%
Gender		
Male	59	7.1
Female	764	92.5
Transgender	2	0.2
Prefer not to answer	1	0.1
Age		
18–24	27	3.3
25–34	394	47.7
35–44	276	33.4
45–54	85	10.3
55–64	43	5.2
Location		
North America	800	96.9
South America	1	0.1
Europe	12	1.5
Africa	1	0.1
Asia	8	1.0
Oceania	4	0.5
Education		
High school diploma	7	0.8
Bachelor's degree	64	7.7
Master's degree	675	81.7
Doctorate degree	80	9.7
Employment		
Self-employed	126	15.3
Employed under contract	631	76.4
Both	31	3.8
Setting		
ABA clinic or center	189	22.9
School, other	104	12.6
Center, other	12	1.5
Home based	174	21.1
Other	53	6.4
Two or more settings	293	35.4
Years of experience		
<1 year	12	1.5
1–2 years	53	6.4
3–5 years	218	26.4
6–10 years	241	29.2
11–15 years	145	17.6
16–20 years	80	9.7
>20 years	75	9.1
NA or unknown	2	0.2
Salary range		
<\$15,000	16	1.9
\$15,000–\$19,999	12	1.5
\$20,000–\$24,999	24	2.9
\$25,000–\$34,999	41	5.0

Table 1 (continued)

Characteristics and Categories	<i>n</i>	%
\$35,000–\$44,999	46	5.6
\$45,000–\$54,999	55	6.7
\$55,000–\$64,999	101	12.2
\$65,000–\$74,999	177	21.4
\$75,000–\$84,999	135	16.3
>\$85,000	204	24.7
NA or unknown	14	1.7
Salary satisfaction		
Yes	473	57.3
No	350	42.4
Certification		
RBT	39	4.7
BCaBA	20	2.4
BCBA	592	71.7
BCBA-D	54	6.5
Student	36	4.4
Two or more certifications	79	9.5
Number of certified professionals in team		
Works alone	71	8.6
1–3	197	23.8
4–5	129	15.6
6–10	151	18.3
>10	253	30.6
NA or unknown	25	3.0

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

type and setting, experience, salary, satisfaction with salary, certification, and team size. We included demographic characteristics to gain a broader understanding of the context of each participant's work environment and to identify variables that might influence levels of work–life balance, work engagement, and burnout.

Self-Care Strategies

We used the 21-item Self-Care Assessment for Psychologists (SCAP; Dorociak et al., 2017). Items on the SCAP evaluate the extent to which individuals engage in behaviors within five dimensions of self-care: professional support, professional development, life balance, cognitive awareness, and daily balance. Participants responded to items using a 7-point Likert-type scale, ranging from 1 (*never*) to 7 (*always*). Sample items included “I maintain a professional support system” and “I make a proactive effort to manage the challenges of my professional work.” We computed average overall scale scores and scores within each dimension by summing individual item scores and computing the average; higher scores

indicated a higher frequency of engaging in self-care practices. The internal consistency for the overall scale scores of this study sample was $\alpha = .92$; internal consistency for each of the dimensions was as follows: professional support was $\alpha = .86$, professional development was $\alpha = .85$, life balance was $\alpha = .89$, cognitive awareness was $\alpha = .84$, and daily balance was $\alpha = .78$.

Job-Crafting Practices

We used the 21-item Job Crafting Scale (JCS; Tims et al., 2012). Items on the JCS evaluate the extent to which individuals engage in behaviors within four dimensions of job crafting: increasing structural job resources (Items 1–5), decreasing hindering job demands (Items 6–11), increasing social resources (Items 12–16), and increasing challenging job demands (Items 17–21). Participants responded to items using a 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items included “I make sure that my work is mentally less intense” and “If there are new developments, I am one of the first to learn about them and try them out.” We computed average overall scale scores and scores within each dimension by summing individual item scores and computing the average; higher scores indicated a higher frequency of engaging in job-crafting practices. The internal consistency for the overall scale scores of this study sample was $\alpha = .75$; internal consistency for each of the dimensions was as follows: increasing structural job resources was $\alpha = .58$, decreasing hindering job demands was $\alpha = .79$, increasing social resources was $\alpha = .80$, and increasing challenging job demands was $\alpha = .77$.

Work–Life Balance

We used the 15-item Work/Life Balance Self-Assessment Scale (Smeltzer et al., 2016). The scale evaluates work–life balance within three domains: personal life interfering with work (Items 4, 6, 9, and 11), work interfering with personal life (Items 1, 2, 5, 7, 8, 10, 12, 14, and 15), and work/personal life enhancement (Items 1, 3, 13, and 15). Participants responded to items using a 7-point Likert-type scale, ranging from 1 (*not at all*) to 7 (*all the time*), representing the frequency with which individuals have experienced the behaviors listed. We reverse-scored negatively stated items (Items 2, 4, 5, 6, 7, 8, 9, 10, 11, and 12) so that higher scores reflected higher levels of work–life balance. We computed the average overall scale score by summing individual item scores and computing the average. The internal consistency for the overall scale score of this study sample was $\alpha = .90$.

Work Engagement

We used the three-item Utrecht Work Engagement Scale (Schaufeli et al., 2019). Participants responded to items using a 6-point Likert-type scale, ranging from 0 (*never*) to 5 (*very*

often). The three items of the scale are “At my work, I feel bursting with energy,” “I am enthusiastic about my job,” and “I am immersed in my work,” measuring vigor, dedication, and absorption, respectively. We computed the average overall scale score by summing individual item scores and computing the average; higher scores indicated higher levels of work engagement. The internal consistency for the overall scale scores of this study sample was $\alpha = .73$.

Burnout

We used the 16-item Oldenburg Burnout Inventory (OLBI; Demerouti et al., 2010). Positively and negatively formulated items on the OLBI evaluate two dimensions of burnout: exhaustion and disengagement. Each subscale includes eight items, with four positively worded items and four negatively worded items. Participants responded to items using a 4-point Likert-type scale, ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). A sample item from this scale is “Lately, I tend to think less at work and do my job almost mechanically.” We computed the average overall scale score and scores within each dimension by summing individual item scores and computing the average; higher scores reflected higher levels of burnout (i.e., exhaustion and disengagement). The internal consistency for the overall scale scores of this study sample was $\alpha = .90$; internal consistency for each of the dimensions was as follows: exhaustion was $\alpha = .85$, and disengagement was $\alpha = .81$.

Study Design and Statistical Analysis

This study used a nonexperimental design that allowed for a descriptive analysis of the research question of whether self-care strategies and job-crafting practices predict work–life balance, work engagement, and burnout. We used Pearson product-moment correlation coefficients to investigate the research hypotheses and other relationships among the study’s variables. We computed a correlation matrix for all variables.

We used hierarchical regression analyses to explore how self-care strategies and job-crafting practices, above and beyond the role of sociodemographic variables (i.e., gender and years of experience), contribute to work–life balance, work engagement, and burnout. We controlled for gender and years of experience to align with previous studies (e.g., Rudolph et al., 2017; Yepes-Baldó et al., 2018). Rudolph et al. (2017) found that tenure was negatively related to job crafting, and females engaged in job crafting more frequently than males. Conversely, Yepes-Baldó et al. (2018) found no gender differences for job crafting. Data analyses used IBM SPSS Statistics 26 computer software.

Results

Work–Life Balance, Work Engagement, and Burnout

Table 2 lists all means and standard deviations of the principal outcome variables. No less than 733 of 826 participants responded to each of the outcome variable scales.

Frequency of Self-Care Strategies

Table 3 lists the means, standard deviations, and ranges for the frequency of using self-care strategies. Cognitive awareness strategies were used most frequently, and daily balance strategies were used least frequently.

Frequency of Job-Crafting Practices

Table 4 lists the means, standard deviations, and ranges for the frequency of using job-crafting practices. Job crafting for increasing structural job resources was used most frequently, and job crafting for decreasing hindering job demands was used least frequently.

Intercorrelations Among Study Variables

We calculated Pearson product-moment correlation coefficients and constructed a correlation matrix to investigate the relationships among the study's variables, including the primary relationships as indicated in the study's hypotheses.

Hypothesis 1 stated that self-care strategies (individually and collectively) would be positively associated with perceptions of work–life balance and work engagement and negatively associated with burnout. Table 5 shows the intercorrelations among self-care strategies, work–life balance, work engagement, and burnout. We used a Pearson's r correlation analysis to assess the relationship between self-care strategies and perceptions of work–life balance, work engagement, and burnout. The analysis

Table 2 Work–Life Balance, Work Engagement, and Burnout Descriptive Statistics

Variable	n	M	SD	Range
Work–life balance	757	4.32	0.94	1.40–7.00
Work engagement	750	4.57	1.03	1.00–7.00
Burnout: disengagement	733	2.84	0.54	1.13–4.00
Burnout: exhaustion	733	2.49	0.55	1.00–4.00

Note. Scores on the Work/Life Balance Self-Assessment Scale ranged from 1 (*not at all*) to 7 (*all the time*). Scores on the Utrecht Work Engagement Scale ranged from 0 (*never*) to 5 (*very often*). Scores on the Oldenburg Burnout Inventory ranged from 1 (*strongly disagree*) to 4 (*strongly agree*).

Table 3 Self-Care Descriptive Statistics

Variable	n	M	SD	Range
Professional support	826	4.96	1.25	2.00–7.00
Professional development	826	4.63	1.23	1.80–7.00
Life balance	825	5.07	1.29	2.00–7.00
Cognitive awareness	824	5.20	1.12	1.75–7.00
Daily balance	824	3.70	1.38	1.00–7.00
Overall self-care	826	4.77	0.95	2.19–7.00

Note. Scores on the Self-Care Assessment for Psychologists Scale ranged from 1 (*never*) to 7 (*always*).

indicated that all relationships between self-care strategies and the outcome variables were statistically significant; self-care strategies were positively related to work–life balance and work engagement and negatively related to burnout. Our results support Hypothesis 1.

Table 6 shows the intercorrelations among job-crafting practices, work–life balance, work engagement, and burnout. Hypothesis 2 stated that job-crafting practices (individually and collectively) would be positively associated with perceptions of work–life balance and work engagement and negatively associated with burnout. We used a Pearson's r correlation analysis to assess the relationship between job-crafting practices and perceptions of work–life balance, work engagement, and burnout. The analysis indicated that nearly all relationships between job-crafting practices and the outcome variables were statistically significant. The only relationships that were not statistically significant in this analysis were between the job-crafting dimension of decreasing hindering demands and work engagement, $r(748) = -.01$, $p = .76$, and burnout (disengagement), $r(731) = -.05$, $p = .16$. Contrary to our hypothesis, decreasing hindering job demands was negatively related to work engagement. All other dimensions of job-crafting practices—and overall job crafting—were positively significantly related to work–life balance and work engagement and negatively related to burnout. Our results partially support Hypothesis 2.

Table 4 Job-Crafting Descriptive Statistics

Variable	n	M	SD	Range
Increasing structural job resources	771	4.39	0.43	2.60–5.00
Decreasing hindering job demands	771	2.69	0.76	1.00–5.00
Increasing social job resources	771	3.73	0.85	1.00–5.00
Increasing challenging job demands	771	3.75	0.78	1.00–5.00
Overall job crafting	771	3.60	0.42	2.00–5.00

Note. Scores on the Job Crafting Scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).

Table 5 Intercorrelations Between Self-Care Practices, Work–Life Balance, Work Engagement, and Burnout

Variable	1	2	3	4	5	6	7	8	9	10
1. Professional support	—									
2. Professional development	.64**	—								
3. Life balance	.52**	.51**	—							
4. Cognitive awareness	.46**	.49**	.60**	—						
5. Daily balance	.22**	.23**	.43**	.48**	—					
6. Overall self-care	.80**	.80**	.80**	.78**	.57**	—				
7. Work–life balance	.31**	.29**	.55**	.42**	.53**	.54**	—			
8. Work engagement	.40**	.42**	.32**	.33**	.12*	.44**	.34**	—		
9. Burnout: disengagement	−.37**	−.42**	−.36**	−.31**	−.21**	−.45**	−.56**	−.68**	—	
10. Burnout: exhaustion	−.27**	−.34**	−.46**	−.37**	−.44**	−.49**	−.79**	−.51**	.68**	—

Note. The Self-Care Assessment for Psychologists ranged from 1 (*never*) to 7 (*always*). The Work/Life Balance Self-Assessment Scale ranged from 1 (*not at all*) to 7 (*all the time*). The Utrecht Work Engagement Scale ranged from 0 (*never*) to 5 (*very often*). The Oldenburg Burnout Inventory ranged from 1 (*strongly disagree*) to 4 (*strongly agree*).

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

Relationship Between Self-Care Strategies and Job-Crafting Practices

As an exploratory analysis, we used a Pearson's r correlation analysis to evaluate the relationship between individual and overall self-care strategies and job-crafting practices. Table 7 shows the intercorrelations among self-care strategies and job-crafting practices, individually and collectively. Three correlations were nonsignificant: (a) professional support and decreasing hindering job demands, $r(769) = .05$, $p = .18$; (b) professional development and decreasing hindering job demands, $r(769) = .05$, $p = .13$; and (c) daily balance and increasing challenging job demands, $r(769) = -.01$, $p = .85$.

Impact of Self-Care Strategies

Self-Care Strategies on Work–Life Balance

We used hierarchical regression to investigate whether self-care strategies (collectively) predict work–life balance. The first

model, controlling for gender and years of experience, was analyzed and accounted for a significant amount of the variance in work–life balance, $R^2 = .01$, $F(2, 754) = 4.47$, $p < .05$, with years of experience ($\beta = .09$, $sr^2 = 0.01$, $p = .01$) uniquely predicting 1% of the variance in work–life balance. The second model added self-care strategies and accounted for a significant amount of the variance in work–life balance, $R^2 = .29$, $F(3, 753) = 102.41$, $p < .001$, with self-care practices ($\beta = .53$, $sr^2 = 0.28$, $p = .000$) uniquely predicting 28% of the variance in work–life balance above and beyond gender and years of experience.

Self-Care Strategies on Work Engagement

We used hierarchical regression to investigate whether self-care strategies (collectively) predict work engagement. The first model, controlling for gender and years of experience, was analyzed and accounted for a significant amount of the variance in work engagement, $R^2 = .01$, $F(2, 747) = 3.68$, $p < .05$, with years of experience ($\beta = .09$, $sr^2 = 0.01$, $p = .01$) uniquely predicting 1% of the variance in work engagement. The second

Table 6 Intercorrelations Between Job Crafting, Work–Life Balance, Work Engagement, and Burnout

Variable	1	2	3	4	5	6	7	8	9
1. Increasing structural job resources	—								
2. Decreasing hindering job demands	.00	—							
3. Increasing social job resources	.19***	.09*	—						
4. Increasing challenging job demands	.44***	−.11**	.25***	—					
5. Overall job crafting	.53***	.51***	.68***	.62***	—				
6. Work–life balance	.18***	.30***	.13***	.17***	.34***	—			
7. Work engagement	.37***	−.01	.29***	.43***	.42***	.34***	—		
8. Burnout: disengagement	−.40***	−.05	−.28***	−.37***	−.43***	−.56***	−.68***	—	
9. Burnout: exhaustion	−.25***	−.24***	−.14***	−.26***	−.37***	−.79***	−.51***	.68***	—

Note. The Job Crafting Scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The Work/Life Balance Self-Assessment Scale ranged from 1 (*not at all*) to 7 (*all the time*). The Utrecht Work Engagement Scale ranged from 0 (*never*) to 5 (*very often*). The Oldenburg Burnout Inventory ranged from 1 (*strongly disagree*) to 4 (*strongly agree*). * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 7 Intercorrelations Between Self-Care and Job Crafting

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Professional support	—										
2. Professional development	.64***	—									
3. Life balance	.52***	.51***	—								
4. Cognitive awareness	.46***	.49***	.60***	—							
5. Daily balance	.22***	.23***	.43***	.48***	—						
6. Overall self-care	.80***	.80***	.80***	.78***	.57***	—					
7. Increasing structural job resources	.28***	.46***	.24***	.35***	.13***	.40***	—				
8. Decreasing hindering job demands	.05	.05	.23***	.22***	.48***	.24***	.00	—			
9. Increasing social job resources	.30***	.25***	.23***	.20***	.10**	.30***	.19***	.09*	—		
10. Increasing challenging job demands	.35***	.45***	.19***	.26***	-.01	.36***	.44***	-.11**	.25***	—	
11. Overall job crafting	.40***	.46***	.38***	.41***	.33***	.53***	.53***	.51***	.68***	.62***	—

Note. The Self-Care Assessment for Psychologists ranged from 1 (*never*) to 7 (*always*). The Job Crafting Scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).

* $p < .05$. ** $p < .01$. *** $p < .001$.

model added self-care strategies and accounted for a significant amount of the variance in work engagement, $R^2 = .20$, $F(3, 746) = 60.27$, $p < .001$, with self-care strategies ($\beta = .43$, $sr^2 = 0.18$, $p = .000$) uniquely predicting 19% of the variance in work engagement above and beyond gender and years of experience.

Self-Care Strategies on Burnout: Disengagement

We used hierarchical regression to investigate whether self-care strategies (collectively) predict the disengagement facet of burnout. The first model, controlling for gender and years of experience, was analyzed and accounted for a significant amount of the variance in disengagement, $R^2 = .01$, $F(2, 730) = 4.54$, $p < .05$, with years of experience ($\beta = -.10$, $sr^2 = 0.01$, $p = .006$) uniquely predicting 1% of the variance in disengagement. The second model added self-care strategies and accounted for a significant amount of the variance in disengagement, $R^2 = .21$, $F(3, 729) = 64.50$, $p < .001$, with self-care strategies ($\beta = -.45$, $sr^2 = 0.20$, $p = .000$) uniquely predicting 20% of the variance in disengagement above and beyond gender and years of experience.

Self-Care Strategies on Burnout: Exhaustion

We used hierarchical regression to investigate whether self-care strategies (collectively) predict the exhaustion facet of burnout. The first model, controlling for gender and years of experience, was analyzed and accounted for a significant amount of the variance in exhaustion, $R^2 = .04$, $F(2, 730) = 15.66$, $p < .001$, with gender ($\beta = .08$, $sr^2 = 0.01$, $p < .05$) uniquely predicting 1% of the variance in exhaustion, and years of experience ($\beta = -.18$, $sr^2 = 0.03$, $p < .05$) uniquely

predicting 3% of the variance in exhaustion. The second model added self-care strategies and accounted for a significant amount of the variance in exhaustion, $R^2 = .26$, $F(3, 729) = 83.83$, $p < .001$, with self-care strategies ($\beta = -.47$, $sr^2 = 0.22$, $p = .000$) uniquely predicting 22% of the variance in exhaustion above and beyond gender and years of experience.

Summary of the Impact of Self-Care Strategies

Table 8 provides a summary of the hierarchical regression results demonstrating that self-care strategies (collectively) predict work–life balance, work engagement, and burnout, controlling for gender and years of experience. These findings support Hypothesis 3.

Impact of Job-Crafting Practices

Job-Crafting Practices on Work–Life Balance

We used hierarchical regression to investigate whether job-crafting practices (collectively) predict work–life balance. The first model, controlling for gender and years of experience, was analyzed and accounted for a significant amount of the variance in work–life balance, $R^2 = .01$, $F(2, 754) = 4.47$, $p < .05$, with years of experience ($\beta = .09$, $sr^2 = 0.01$, $p = .013$) uniquely predicting 1% of the variance in work–life balance. The second model added job crafting and accounted for a significant amount of the variance in work–life balance, $R^2 = .13$, $F(3, 753) = 37.72$, $p < .001$, with job crafting ($\beta = .35$, $sr^2 = 0.12$, $p = .000$) uniquely predicting 12% of the variance in work–life balance above and beyond gender and years of experience.

Table 8 Hierarchical Regression Results for Self-Care Strategies on Work–Life Balance, Work Engagement, and Burnout

Variable	B	95% CI for B		SE B	β	R ²	ΔR ²
		LL	UL				
Work–life balance							
Step 1						0.01	.01*
Constant	4.37	3.84	4.9	0.27			
Gender	−0.16	−0.39	0.08	0.12	−0.05		
Experience (years)	0.06	0.01	0.11	0.02	0.09		
Step 2						0.29	.28***
Constant	1.82	1.29	2.36	0.27			
Gender	−0.06	−0.26	0.14	0.1	−0.02		
Experience (years)	0.02	−0.02	0.06	0.02	0.03		
Self-care strategies	0.53	0.47	0.59	0.03	0.53		
Work engagement							
Step 1						0.01	.01*
Constant	4.47	3.89	5.06	0.3			
Gender	−0.1	−0.36	0.16	0.13	−0.03		
Experience (years)	0.07	0.01	0.12	0.03	0.09		
Step 2						0.2	.19***
Constant	2.18	1.56	2.81	0.32			
Gender	−0.01	−0.24	0.22	0.12	0		
Experience (years)	0.03	−0.02	0.08	0.02	0.04		
Self-care strategies	0.48	0.4	0.55	0.04	0.43		
Burnout: disengagement							
Step 1						0.01	.01*
Constant	2.22	1.92	2.53	0.16			
Gender	0.05	−0.09	0.19	0.07	0.03		
Experience (years)	−0.04	−0.07	−0.01	0.01	−0.1		
Step 2						0.21	.20***
Constant	3.47	3.14	3.79	0.17			
Gender	0.01	−0.11	0.13	0.06	0		
Experience (years)	−0.02	−0.05	0	0.01	−0.06		
Self-care strategies	−0.26	−0.3	−0.22	0.02	−0.45		
Burnout: exhaustion							
Step 1						0.04	.04***
Constant	2.51	2.2	2.82	0.16			
Gender	0.15	0.01	0.29	0.07	0.08		
Experience (years)	−0.07	−0.1	−0.04	0.01	−0.18		
Step 2						0.26	.22***
Constant	3.84	3.51	4.16	0.17			
Gender	0.1	−0.02	0.23	0.06	0.05		
Experience (years)	−0.05	−0.07	−0.03	0.01	−0.13		
Self-care strategies	−0.28	−0.31	−0.24	0.02	−0.47		

p* < .05. *p* < .01. ****p* < .001.

Job-Crafting Practices on Work Engagement

We used hierarchical regression to investigate whether job-crafting practices (collectively) predict work engagement. The

first model, controlling for gender and years of experience, was analyzed and accounted for a significant amount of the variance in work engagement, $R^2 = .01$, $F(2, 747) = 3.68$, $p < .05$, with years of experience ($\beta = .09$, $sr^2 = 0.28$, $p = .000$) uniquely predicted a significant amount of the variance in work engagement. The second model added job crafting and accounted for a significant amount of the variance in work engagement, $R^2 = .19$, $F(3, 746) = 59.33$, $p < .001$, with job-crafting practices ($\beta = .43$, $sr^2 = 0.18$, $p = .000$) uniquely predicting 18% of the variance in work engagement above and beyond gender and years of experience.

Job-Crafting Practices on Burnout: Disengagement

We used hierarchical regression to investigate whether job-crafting practices (collectively) predict the disengagement facet of burnout. The first model, controlling for gender and years of experience, was analyzed and accounted for a significant amount of the variance in disengagement, $R^2 = .01$, $F(2, 730) = 4.54$, $p < .05$, with years of experience ($\beta = -0.1$, $sr^2 = 0.01$, $p = .006$) predicting 1% of the variance in disengagement. The second model added job crafting and accounted for a significant amount of the variance in disengagement, $R^2 = .20$, $F(3, 729) = 61.77$, $p < .001$, with job-crafting practices ($\beta = -.44$, $sr^2 = 0.19$, $p = .000$) uniquely predicting 19% of the variance in disengagement above and beyond gender and years of experience.

Job-Crafting Practices on Burnout: Exhaustion

We used hierarchical regression to investigate whether job-crafting practices (collectively) predict the exhaustion facet of burnout. The first model, controlling for gender and years of experience, was analyzed and accounted for a significant amount of the variance in exhaustion, $R^2 = .04$, $F(2, 730) = 15.66$, $p < .001$, with gender ($\beta = .08$, $sr^2 = 0.01$, $p = .034$) uniquely predicting 1% of the variance in exhaustion, and years of experience ($\beta = -.18$, $sr^2 = 0.03$, $p = .000$) uniquely predicting 1% of the variance in exhaustion. The second model added job crafting and accounted for a significant amount of the variance in exhaustion, $R^2 = .19$, $F(3, 729) = 57.15$, $p < .001$, with job crafting ($\beta = .39$, $sr^2 = 0.15$, $p = .000$) uniquely predicting 15% of the variance in exhaustion above and beyond gender and years of experience.

Summary of the Impact of Job-Crafting Practices

Table 9 provides a summary of the hierarchical regression results demonstrating that job-crafting practices (collectively) predict work–life balance, work engagement, and burnout, controlling for gender and years of experience. These findings support Hypothesis 4.

Discussion

Results from the current study suggest that, individually and collectively, self-care strategies and job-crafting practices improve work–life balance and work engagement and reduce burnout. Although self-care and job crafting were strong predictors, self-care was a stronger predictor of work–life balance, work engagement, and burnout. As the use of self-care strategies increases, work–life balance and work engagement increase, and disengagement and exhaustion decrease. Life balance (self-care strategy) and increasing challenging job demands (job-crafting practice) demonstrated the greatest negative relationship to exhaustion. Life balance strategies have been highlighted for their role in reducing stress and predicting lower levels of emotional exhaustion (Dorociak et al., 2017; Rupert & Dorociak, 2019).

Although positively related to work–life balance and negatively related to burnout, as expected, decreasing hindering job demands (a job-crafting practice) was negatively related to work engagement. One reason for this finding may be that activities deemed as hindering to the individual employee also improve their engagement in their work, such as interacting with emotionally demanding clients (Hakanen et al., 2017). Therefore, work engagement—and potentially its positive consequences (e.g., work performance, job satisfaction, and decreased turnover)—decreases.

In support of the extant literature, results indicated that as job-crafting strategies increase, work–life balance increases (e.g., Gordon et al., 2018), well-being increases (e.g., van Wingerden et al., 2017a), work engagement increases (e.g., Sakuraya et al., 2017; van Wingerden et al., 2016, 2017a), and burnout decreases (e.g., Gordon et al., 2018). Our findings conflict with van Wingerden et al.'s (2017b) findings; they did not observe a significant increase in work engagement following a job-crafting intervention. One reason for the difference in findings may be due to the difference in the nature of the studies (survey vs. intervention), as well as the specific job-crafting strategies used by participants in each sample. Last, our findings contributed to the limited research on Dorociak et al.'s (2017) conceptualization of self-care. Specifically, the results offer support to Rupert and Dorociak's (2019) findings that practicing self-care leads to reductions in burnout.

Strengths and Limitations

The convenience sample of ABA practitioners, the voluntary nature of participation, and the self-report nature of the survey measures used to gather this information limit generalizability. That said, a significant strength of the current study is its sample size, having a much larger sample size ($n = 826$) than previous studies addressing burnout among ABA practitioners (e.g., $n = 81$, Gibson et al., 2009; $n = 45$, Griffith et al., 2014;

$n = 183$, Plantiveau et al., 2018). Although we were unable to calculate the response rate, the use of recruitment emails and posts disseminated to relevant professional organizations, Listservs, and social media pages appears to have been a successful method for online recruitment and supports reported benefits of online survey recruitment, including speed of recruitment, cost-efficiency, and snowballing effects (Stokes et al., 2019).

A review of the sociodemographic data from the current study revealed that participants in our sample were predominantly BCBA-certified practitioners with 6–10 years of experience, nearly 100% living in North America, who earned \$55,000 or more annually and were satisfied with their salaries. Plantiveau et al.'s (2018) sample was composed primarily of BCBA-certified practitioners with less than 5 years of experience (41% identified as students), just over half residing in North America, who earned \$55,000 or less annually and were dissatisfied with their salaries. Despite demographic differences, a comparison with our findings revealed similarities regarding self-reported levels of burnout. Specifically, Plantiveau et al. found that approximately two thirds of ABA practitioners experienced moderate to high levels of burnout. In our sample, approximately 72% of practitioners reported moderate to high levels of burnout. Collectively, findings from Plantiveau et al. and the current study contrast with other studies that found low levels of burnout in this population (e.g., Gibson et al., 2009; Griffith et al., 2014; Jennett et al., 2003).

Implications for Research, Practice, Supervision/Education, and the Profession

The findings of this research provide implications for researchers, practitioners, and their employers/supervisors; graduate programs that prepare future ABA practitioners; and the profession at large. We encourage practitioners and researchers, alike, to identify specific actions within the dimensions of self-care and job-crafting practices that are under the control of individual employees. Individual items from the SCAP and JCS self-report measures provide a useful starting point for identifying and defining measurable and objective target behaviors for self-directed behavior change plans and evaluation in single-subject intervention research.

Given that we found that self-care strategies and job-crafting practices were significantly related to one another (individually and collectively), many of the methods in which individuals “craft” their jobs could serve as practices of professional self-care. Researchers may use this finding to further explore the relationships between self-care and job-crafting practices; although the absolute value of r indicates weak relationships (all are $r < 0.48$), most of the analyses were statistically significant (perhaps a by-product of the large sample size). Professional support (self-care practice) had the

Table 9 Hierarchical Regression Results for Job-Crafting Practices on Work–Life Balance, Work Engagement, and Burnout

Variable	<i>B</i>	95% CI for <i>B</i>		<i>SE B</i>	β	<i>R</i> ²	ΔR^2
		<i>LL</i>	<i>UL</i>				
Work–life balance							
Step 1						0.01	.01*
Constant	4.37	3.84	4.9	0.27			
Gender	−0.16	−0.39	0.08	0.12	−0.05		
Experience (years)	0.06	0.01	0.11	0.02	0.09		
Step 2						0.13	.12***
Constant	1.5	0.75	2.24	0.38			
Gender	−0.15	−0.37	0.07	0.11	−0.05		
Experience (years)	0.08	0.03	0.12	0.02	0.12		
Job-crafting practices	0.77	0.62	0.92	0.08	0.35		
Work engagement							
Step 1						0.01	.01*
Constant	4.47	3.89	5.06	0.3			
Gender	−0.1	−0.36	0.16	0.13	−0.03		
Experience (years)	0.07	0.01	0.12	0.03	0.09		
Step 2						0.19	.18***
Constant	0.55	−0.24	1.34	0.4			
Gender	−0.09	−0.32	0.15	0.12	−0.03		
Experience (years)	0.09	0.04	0.14	0.02	0.13		
Job-crafting practices	1.06	0.9	1.22	0.08	0.43		
Burnout: disengagement							
Step 1						0.01	.01*
Constant	2.22	1.92	2.53	0.16			
Gender	0.05	−0.09	0.19	0.07	0.03		
Experience (years)	−0.04	−0.07	−0.01	0.01	−0.1		
Step 2						0.2	.19***
Constant	4.33	3.91	4.75	0.21			
Gender	0.05	−0.08	0.17	0.06	0.03		
Experience (years)	−0.05	−0.08	−0.03	0.01	−0.14		
Job-crafting practices	−0.57	−0.65	−0.48	0.04	−0.44		
Burnout: exhaustion							
Step 1						0.04	.04***
Constant	2.51	2.2	2.82	0.16			
Gender	0.15	0.01	0.29	0.07	0.08		
Experience (years)	−0.07	−0.1	−0.04	0.01	−0.18		
Step 2						0.19	.15***
Constant	4.42	4	4.85	0.22			
Gender	0.14	0.02	0.27	0.07	0.08		
Experience (years)	−0.08	−0.11	−0.06	0.01	−0.21		
Job-crafting practices	−0.51	−0.6	−0.43	0.04	−0.39		

p* < .05. *p* < .01. ****p* < .001.

strongest relationship to increasing social job resources (job-crafting practice). Professional development, life balance, and cognitive strategies (self-care practices) each had the strongest relationship to increasing structural job resources (job-crafting practice). Last, daily balance (self-care practice) had the

strongest relationship to decreasing hindering job resources (job-crafting practice). Exceptions to this finding were the lack of a relationship between decreasing hindering job demands and professional support and professional development, and between daily balance and increasing challenging

job demands. In other words, decreasing hindering job demands appears to have qualities independent of both professional support and professional development; likewise, daily balance involves activities unique from increasing challenging job demands. In sum, future research should seek to expand the measures used in this study to include both self-report assessments and objective behavioral measures to objectively define variables, enhance the utility of the predictive conclusions, and allow for demonstrations of experimental control.

The development of assessment tools is yet another way that behavior analysts can contribute to this line of research and provide ABA practitioners with resources and support to navigate work–life balance, maintain a healthy engagement in their work, and reduce job-related burnout. Assessments identifying personal, sociocultural, and environmental variables that support and hinder individual use of self-care strategies and job-crafting practices can inform interventions and the development of behavior change action plans. Altogether, researchers can further assess and add to the literature on the effects of self-care and job-crafting interventions on personal and organizational well-being outcomes (e.g., work–life balance, work engagement, burnout, turnover intentions, job satisfaction). Although our findings suggest that self-care is a stronger predictor of work–life balance, work engagement, and burnout, we contend that job-crafting interventions are also worth exploring.

Findings from this research lend support for the further development of supervision and professional support systems within educational and organizational environments to address concerns about supervision, training, and social support among ABA practitioners (Kazemi et al., 2015; Plantiveau et al., 2018). One approach might be the inclusion of information within graduate training curricula and supervision experiences related to managing burnout, developing a personal and professional self-care plan, and creating a culture within the profession that supports efforts to maintain psychological well-being. If aspiring practitioners receive training and their self-care behaviors are reinforced during this early stage in their careers, we expect that these behaviors would become part of their personal and professional self-care repertoires once they enter the field (Barnett & Cooper, 2009; Smith & Moss, 2009). An emphasis on the continuous, proactive use of self-care strategies and job-crafting practices is necessary; these practices should be used intentionally as a preventative strategy versus avoided or only used when one is unwell or feeling increased levels of stress, disengagement, or exhaustion. Experienced professionals (faculty, supervisors, mentors, and practitioners with more years of experience) are well positioned to serve as role models for students, supervisees, and junior colleagues. In addition to modeling self-care and job-crafting behaviors, experienced professionals may consider sharing stories related to personal struggles with maintaining a healthy work–life balance, distress and the strategies used to cope with distress effectively, and the value of ongoing activities to support one’s health and well-being (Barnett & Cooper, 2009;

McCann et al., 2013; Pappas, 2020). The goal is for the culture of graduate training programs and supervisory experiences to support versus become a barrier to well-being (Pappas, 2020).

Additionally, both organizations and graduate training programs might explore establishing a formal mentorship program. Mentors could help mentees develop a greater sense of self-awareness related to their well-being, serve as a source of professional support, and provide positive reinforcement for engaging in self-care strategies and job-crafting practices. Mentors may also help mentees develop a self-management program focused on the use of self-care and job-crafting behaviors. Once this is developed, both parties could sign a behavioral contract. Not only does the behavioral contract allow both the mentor and mentee to agree on goals and procedures, clarify the evaluation of progress, and identify necessary resources and costs, but it also increases accountability and commitment (Martin & Pear, 2019). A summary of recommended actions based on our findings is in [Appendix B](#).

Finally, our findings support our earlier contention that self-care is an ethical imperative. Developing a self-care repertoire has important implications related to the ethical practice of ABA practitioners. In their role as the certifying organization for behavior analysts, the BACB might consider more directly addressing self-care in the BACB Ethics Code. Doing so is not unusual; for example, statements instructing practitioners to engage in self-care activities exist in both the *Canadian Code of Ethics for Psychologists* (Canadian Psychological Association, 2017) and the *Code of Ethics for the American Counseling Association* (2014). Additionally, the BACB, relevant professional membership organizations (e.g., the Association for Behavior Analysis International and Association of Professional Behavior Analysts), and authorized continuing education providers can support practitioners’ development and maintenance of self-care skills by encouraging and offering relevant training and professional development opportunities.

Conclusion

In sum, we hope that this study’s findings highlight the potential benefits of developing a behavioral repertoire that includes self-care and job-crafting practices. Additionally, we hope our research serves as a starting point to inform and foster additional research to develop effective organizational/systems- and individual-level self-care and job-crafting interventions that support sustainable individual, organizational, and client-related outcomes. This knowledge will allow researchers to offer specific recommendations to human service organizations and practitioners and to identify effective ways to reduce burnout and exhaustion, improve overall well-being and job satisfaction, and ultimately reduce turnover intentions among ABA practitioners.

Declarations

Ethical approval All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and/or national) and with the Helsinki Declaration of 1975, as revised in 2000. Approval was obtained from the Institutional Review Board of the University of Minnesota (May 7, 2019; No. STUDY00006443).

Informed consent Informed consent was obtained from all individuals for whom data are included in this study.

Conflict of interest The authors declare that they have no conflict of interest.

Availability of data and material Not applicable.

Consent for publication Not applicable.

Code availability Not applicable.

Appendix A: Survey Items and Scale Measures

Sociodemographic and job-related characteristics and categories

Characteristic	Categories
Gender	Female
	Male
	Transgender
	Prefer not to answer
Age	18–24
	25–34
	35–44
	45–54
	55–64
Location	North America
	South America
	Europe
	Africa
	Asia
	Oceania
Education	Below high school
	High school diploma
	Bachelor’s degree
	Master’s degree
	Doctorate
Employment ^a	Self-employed
	Employed under contract
Setting ^a	ABA clinic or center
	School, other
	Center, other
	Home based
	Other

(continued)

Characteristic	Categories	
Experience (years)	<1	
	1–2	
	3–5	
	6–10	
	11–15	
	> 20	
	NA or unknown	
	Salary range (\$)	<15,000
		15,000–19,999
		20,000–24,999
25,000–34,999		
35,000–44,999		
45,000–54,999		
55,000–64,999		
65,000–74,999		
75,000–84,999		
>85,000		
NA or unknown		
Satisfied with salary	Yes	
	No	
Certification		
	Certification attained ^a	RBT
		BCaBA
		BCBA
		BCBA-D
		Student
Certified professionals in the team	Works alone	
	1–3	
	4–5	
	6–10	
>10		
NA or unknown		

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

^a Characteristics that allowed multiple answers.

Self-Care Assessment for Psychologists (Dorociak et al., 2017)

For each item, participants rated the frequency with which they engage in the stated behavior on a 7-point Likert-type scale from 1 (*never*) to 7 (*almost always*).

1. I cultivate professional relationships with my colleagues.
2. I avoid workplace isolation.
3. I share work-related stressors with trusted colleagues.
4. I share positive work experiences with colleagues.

5. I maintain a professional support system.
6. I participate in activities that promote my professional development.
7. I connect with organizations in my professional community that are important to me.
8. I take part in work-related social and community events.
9. I find ways to stay current in professional knowledge.
10. I maximize time in professional activities I enjoy.
11. I spend time with people whose company I enjoy.
12. I spend time with family or friends.
13. I seek out activities or people that are comforting to me.
14. I find ways to foster a sense of social connection and belonging in my life.
15. I try to be aware of my feelings and needs.
16. I monitor my feelings and reactions to clients.
17. I am mindful of triggers that increase professional stress.
18. I make a proactive effort to manage the challenges of my professional work.
19. I take breaks throughout the workday.
20. I take some time for relaxation each day.
21. I avoid overcommitment to work responsibilities.

Job Crafting Scale (Tims et al., 2012)

For each item, participants rated the extent to which they agree with each statement on a 5-point Likert-type scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

1. I try to develop my capabilities.
2. I try to develop myself professionally.
3. I try to learn new things at work.
4. I make sure that I use my capacities to the fullest.
5. I decide on my own how I do things.
6. I make sure that my work is mentally less intense.
7. I try to ensure that my work is emotionally less intense.
8. I manage my work so that I try to minimize contact with people whose problems affect me emotionally.
9. I organize my work so as to minimize contact with people whose expectations are unrealistic.
10. I try to ensure that I do not have to make many difficult decisions at work.
11. I organize my work in such a way to make sure that I do not have to concentrate for too long a period at once.
12. I ask my supervisor to coach me.
13. I ask whether my supervisor is satisfied with my work.
14. I look to my supervisor for inspiration.
15. I ask others for feedback on my job performance.
16. I ask colleagues for advice.
17. When an interesting project comes along, I offer myself proactively as project co-worker.
18. If there are new developments, I am one of the first to learn about them and try them out.
19. When there is not much to do at work, I see it as a chance to start new projects.

20. I regularly take on extra tasks even though I do not receive extra salary for them.
21. I try to make my work more challenging by examining the underlying relationships between aspects of my job.

Work/Life Balance Self-Assessment Scale (Smeltzer et al., 2016)

For each item, participants reported the frequency with which they experienced certain behaviors during the past 3 months using a 7-point Likert-type scale (1 = *not at all*, 4 = *sometimes*, 7 = *all the time*).

1. My job gives me energy to pursue personal activities.
2. My job makes personal life difficult.
3. I am in a better mood at work because of personal life.
4. My work suffers because of my personal life.
5. I neglect personal needs because of work.
6. I find it hard to work because of personal matters.
7. I miss personal activities because of work.
8. My personal life suffers because of work.
9. I am too tired to be effective at work.
10. I put personal life on hold for work.
11. My personal life drains me of energy for work.
12. I struggle to juggle work and nonwork.
13. Personal life gives me energy for my job.
14. I am happy with the amount of time for non-work activities.
15. I am in a better mood because of my job.

Utrecht Work Engagement Scale (Schaufeli et al., 2019)

For each item, participants reported the frequency with which they experienced each item on a 7-point Likert-type scale (1 = *never*, 4 = *frequently*, 7 = *always/every day*).

1. At my work, I feel bursting with energy.
2. I am enthusiastic about my job.
3. I am immersed in my work.

Oldenburg Burnout Inventory (Demerouti et al., 2010)

For each item, participants rated the extent to which they agree with each statement on a 4-point Likert-type scale (1 = *strongly disagree*, 4 = *strongly agree*).

1. I always find new and interesting aspects in my work.
2. There are days when I feel tired before I arrive at work.
3. It happens more and more often that I talk about my work in a negative way.
4. After work I tend to need more time than in the past in order to relax and feel better.
5. I can tolerate the pressure of my work very well.
6. Lately, I tend to think less at work and do my job almost mechanically.
7. I find my work to be a positive challenge.

8. During my work, I often feel emotionally drained.
9. Over time, one can become disconnected from this type of work.
10. After working, I have enough energy for my leisure activities.
11. Sometimes I feel sickened by my work tasks.
12. After my work, I usually feel worn out and weary.
13. This is the only type of work that I can imagine myself doing.
14. Usually, I can manage the amount of my work well.
15. I feel more and more engaged in my work.
16. When I work, I usually feel energized.

Appendix B: Summary Table of Recommended Actions

Summary table of recommended actions

Role	Actions
Practitioners	Identify specific and meaningful actions within the dimensions of self-care strategies and job-crafting practices; create and implement a self-directed behavior change plan.
Researchers	Use items from the SCAP and JCS self-report measures to identify and define measurable and objective target behaviors for evaluation in single-subject intervention research. Explore the relationships between self-care strategies and job-crafting practices to identify unique and overlapping characteristics and qualities. Expand the measures used in this study; include both self-report assessments and objective behavioral measures to enhance the utility of the predictive conclusions and allow for demonstrations of experimental control. Develop assessment tools to identify personal, sociocultural, and environmental variables that support and hinder individual use of self-care strategies and job-crafting practices; tools can inform interventions and the development of behavior change action plans.
Supervisors, educators, and organizations	Include information within graduate training curricula and supervision experiences related to managing burnout, developing a personal and professional self-care plan, and creating a culture within the profession that supports efforts to maintain psychological well-being. Serve as role models for students, supervisees, and junior colleagues; model self-care and job-crafting behaviors, share stories related to personal struggles with maintaining a healthy work–life balance, distress and strategies used to cope with distress effectively, and the value of ongoing activities to support one’s health and well-being. Establish a formal mentorship program to help mentees develop a greater sense of self-awareness related to their well-being, to serve as a source of professional support, and to provide positive reinforcement for engaging in self-care strategies and job-crafting practices.
Profession	Directly address self-care in ethical guidelines; develop statements instructing practitioners to engage in self-care activities. Encourage and offer relevant training and professional development opportunities to support the development and maintenance of practitioners’ self-care skills.

Note. SCAP = Self-Care Assessment for Psychologists; JCS = Job Crafting Scale.

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