Examining Staff and Faculty Work–life Balance and Well-being Using the Dual Continua Model of Mental Health During COVID-19

Lauren A. J. Kirby1®, Staci M. Zolkoski2, Kyle O'Brien1, Joseph Mathew1, Bridget R. Kennedy1, and Sarah M. Sass1

Abstract
The COVID-19 pandemic created work–life balance, mental health, and well-being challenges for higher education employees, both initially and years later. We investigated staff and faculty self-reported work–life balance and quality of life using the dual continua model of mental health at a medium-size university for 9 months during August 2021 to April 2022. The dual continua model of mental health states that high levels of well-being and psychological distress can co-occur, while a unidimensional model of mental health positions well-being and psychological distress on opposite ends of a unipolar continuum. The dual continua model overlaps with and is broader than the unidimensional model. Based on 299 responses, four groups of staff and faculty (high and low anxiety crossed with high and low life satisfaction) were formed. Consistent with the dual continua and inconsistent with the unidimensional model of mental health, high life satisfaction, regardless of anxiety level, was associated with higher levels of quality of life and work–life balance. Consistent with both the unidimensional and dual continua models, within faculty and staff reporting lower levels of life satisfaction, higher levels of anxiety were associated with lower quality of life and work–life balance. In addition, within the high or low anxious groups, higher life satisfaction was associated with lower levels of depression. Present data represent the only study that builds on previous literature in examining well-being and psychological distress using a dual continua model in staff and faculty at a mid-size university. Overall, present results suggest the dual continua model of mental health better characterizes the relationship of well-being and psychological distress in staff and faculty in a higher education setting than a unidimensional model.

Keywords: Dual continua model, mental health, work–life balance, stress, higher education

Work-life balance (WLB) is associated with significant well-being and mental health indicators. For example, there is a positive association between work–family conflict (WFC) and psychological distress among Canadian workers (Badawy & Schieman, 2020). Job stressors such as lack of control over one’s schedule are associated with negative physical health symptoms, such as back pain, headaches, and gastrointestinal distress (e.g., Badawy & Schieman, 2020). Work–family initiatives are associated with lower psychological distress (Li & Wang, 2022). Although higher education faculty jobs are often flexible and unbounded compared to many industry positions, faculty still experience conflict and workplace stress, especially if they perceive low social support (Foy, 2016). Faculty at some research-intensive universities work long hours, in the 50-60 hours per week range (Misra et al., 2012), and longer than non-academic higher education staff (Fontinha et al, 2019) because they believe they are expected to (Hogan et al., 2015). These pressures and their consequences have also been exacerbated by the COVID-19 pandemic (Anwer, 2020; Fox & Anderson, 2020; Rode et al., 2022). In fact, a 2022 Gallup poll of higher education and health care workers indicated 35% of higher education workers felt “burned out at work,” most or all of the time, second only to 44% of K-12 educators who felt this way (Marken & Agrawal, 2022). Additionally, healthcare workers

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(HCWs) have experienced profound detriments to quality of work life (e.g., Mushtaq et al., 2022) and mental health (Shreffler et al., 2020) during the same period. Thus, the current study examined relationships between mental health and well-being indicators among higher education faculty and staff at a university that includes a healthcare system.

**Dual Continua Model of Mental Health and COVID-19**

Mental health research has historically focused on the presence of psychopathology rather than the presence of psychological well-being (e.g., Greenspoon & Saklofske, 2001). This unidimensional mental health model positions psychological distress and psychological well-being on opposite ends of a single dimension (Keyes, 2005, 2007; Renshaw & Cohen, 2014). In this model, high levels of psychological well-being do not co-occur with high levels of psychological distress. In contrast, the dual continua (or dual factor) model of mental health proposes a holistic approach, where psychological well-being and distress are considered on two separate but related dimensions ranging from low to high. People can be grouped into four categories (e.g., Eklund et al., 2010), high well-being and low distress (“complete mental health”), high well-being and high distress (“symptomatic but content”), low well-being and low distress (“at risk”) and low well-being and high distress (“distressed”). An implication of this dual continua model is that an individual can simultaneously experience high levels of psychological distress with high levels of psychological well-being (for reviews see Arslan, 2018; Carver et al., 2021; Keyes, 2005; Renshaw & Cohen, 2014). Psychological distress increased at various time points following the onset of effects of COVID-19 (e.g., Vahratian et al., 2021). Higher rates of anxiety, stress, and depression symptoms were reported at different time points (e.g., Coiro et al., 2021; Saeed et al., 2022; Vahratian et al., 2021), with April-August 2021 rates of past-week anxiety and depression symptoms four-fold higher than January-December 2019 among U.S. adults (e.g., DeAngelis, 2021). It is therefore important to consider anxiety, stress, and depression symptoms in investigations of mental health during COVID-19. However, the dual continua model suggests that it is important to investigate well-being indicators as well.

In examining the dual continua model (DCM), typical well-being indicators have included life satisfaction and quality of life (Eklund et al., 2010; Renshaw & Cohen, 2014). Most studies have explored the DCM with healthy college students, children, or adolescents, with fewer studies investigating adults reporting high levels of psychological distress such as anxiety (e.g., Arslan & Allen, 2022; Carver et al., 2021; Franken et al., 2018; Suldo & Shaffer, 2008). To our knowledge, no published studies have investigated work–life balance, quality of life, depression, and stress in a sample of staff and faculty in a higher education setting with high and low anxiety levels using a DCM mental health framework during COVID-19, a gap we address in the present study.

**Work–Life Balance**

Work–life balance (WLB) has multiple definitions. Some WLB definitions focus on how time is divided and separated between work and non-work domains (e.g., Kalliath & Brough, 2008), whereas other definitions emphasize the permeability and interconnectedness among the domains (Kanter, 1977). WLB is frequently defined in terms of conflict (Carlson et al., 2000) or scarcity of resources to accomplish goals across different life domains (Goode, 1960). Other definitions have focused on the opportunity for one domain to improve another, variously termed work–life enrichment (Brough et al., 2014b; Carlson et al., 2006), work–life enhancement (Voydanoff, 2002), or work–life facilitation (Wayne et al., 2004).

Research on the antecedents and outcomes associated with WLB and related constructs such as work–life conflict (WLC) find that greater job demands usually lower work–life balance, especially cognitive demands (Brough et al., 2014a; Haar et al., 2019), hindering the ability to accomplish role expectations in non-work domains. On the other hand, better time resources such as flexible schedules and remote work can enhance work–life balance (Hill et al., 2001), alongside other variables such as co-worker and partner support (Ferguson et al., 2012) and supervisor support regarding family demands (Brough et al., 2005).

Faculty jobs in higher education tend to have high flexibility and may have a perceived family-friendly environment; however, that does not necessarily translate to increased work–life balance or other well-being outcomes (e.g., Berheide et al., 2020). For example, among higher education employees in the United Kingdom, WLB moderated the relationship between poorer perceived working conditions and lower employee commitment among faculty (Fontinha et al., 2019). Higher job demands among higher education employees contribute to lower work–life balance and burnout (e.g., Zábrodská et al., 2018). Additionally, non-faculty staff positions are typically not
afforded the same flexibility. For example, in a focus group study examining pre-COVID flexible-work arrangements (FWA; such as work-from-home or flex time), Smyth et al. (2020) found that staff described FWAs as requiring individual requests and being up to the judgment of departmental managers: staff could not expect consistency or accessibility regarding FWAs. Health systems employees and trainees experience significant WLB challenges as well, including poor access to childcare, especially for women employees in clinical care roles; these stressors influence them to consider leaving their roles, especially during the COVID-19 pandemic (Delaney et al., 2021).

**Work-life Balance as a Well-being Indicator**

Psychological well-being is a broad construct that includes domains such as physical and mental health, occupational and social functioning, positive and negative affect, quality of life, and life satisfaction (Diener & Ryan, 2009; Dodge et al., 2012). WLB definitions often encompass a subjective sense of satisfaction in meeting expectations in one’s work- and non-work activities (e.g., Brough et al., 2007; Kalliath & Brough, 2008; Kirchmeyer, 2000; Valcour, 2007). In line with this broad conceptualization, WLB can be considered a well-being indicator. For example, WLB predicts life satisfaction (Cazan et al., 2019; Carrà, 2020; Noda, 2020; Neto et al., 2018; Sirgy & Lee, 2016). Further, there is evidence that work–family balance satisfaction decreased as COVID-19 restrictions increased, telecommuting and school closures increased, and the boundaries between work and caring for children decreased (e.g., Hu & Subramony, 2022).

**Present Study**

Our study investigated work–life balance, quality of life, anxiety, depression, and stress using a DCM mental health framework during COVID-19 in staff and faculty in a higher education setting that includes a healthcare system. Specifically, we tested how high levels of anxiety co-occur with indicators of well-being (such as quality of life and WLB) using a DCM mental health approach. We predicted high levels of anxiety would not uniformly be associated with lower levels of WLB and quality of life, as would be expected by a unipolar model, and instead could also be associated with higher levels of WLB and quality of life in line with the DCM.

**Method**

**Participants**

The present study included both campuses (the main and health campus) that comprised the University of Texas at Tyler. Please see Table 1 for the demographic makeup of the sample. In the most recent data available (University of Texas at Tyler Office of Information Analysis, 2021), the present university had 1181 faculty as well as approximately 1500 non-faculty staff and administrative employees.

**Recruitment for the Present Study**

Recruitment emails were shared via the university’s Center for Teaching and Learning in newsletters that were sent to 573 faculty and 1459 staff across both campuses (see Appendix A). The survey received 372 responses from September 2021 to April 2022. Out of those, 299 participants completed the measures used to screen for the study (see below). At the end of the survey, participants could indicate interest in participating in follow-up focus groups. Twenty-five participants were scheduled into six focus groups that will be published separately and are not a focus of the present paper.

**Measures**

**Psychological Distress Measures**

**Depression and Anxiety Screening.** The Patient Health Questionnaire 4 (PHQ-4; Kroenke et al., 2009) is a 4-item self-report measure used to screen for depression and anxiety. It is derived through a combination of two scales: the Patient Health Questionnaire-2 (PHQ-2) and the Generalized Anxiety Disorder-2 (GAD-2; Kroenke et al., 2009). Items are rated on a 4-point Likert-type scale from 0 = not at all to 3 = nearly every day, with a possible score range from 0 to 12. Items include “Feeling nervous, anxious or on edge”, “Not being able to stop or control worrying”, “Little interest or pleasure in doing things”, and “Feeling down, depressed, or hopeless.” Higher scores indicate increased depression and anxiety severity. A score of 3 or greater on the depression items is associated with a sensitivity of 83% and specificity of 90% for major depressive disorder (Kroenke et al., 2003) and a score of 3 or
greater on the anxiety items is associated with sensitivity for generalized anxiety disorder, panic disorder, and social anxiety disorder (ranging from 88%, 76%, and 70% respectively; Kroenke et al., 2007).

**Table 1. Sample demographics**

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<tr>
<th>Gender</th>
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<tr>
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<tr>
<td>Other</td>
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<td>Missing</td>
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**Stress.** The Depression Anxiety Stress Scale - 21 (DASS-21; Lovibond & Lovibond, 1995) is a 21-item self-report measure containing a 7-item stress subscale. The present study used this stress subscale which purports to measure chronic, non-specific arousal. Items are rated on a 4-point Likert-type scale (0 = did not apply to me at all to 3 = applied to me very much or most of the time), with a possible score range from 0 to 21. Sample items are “I tended to over-react to situations” and “I felt that I was rather touchy.” Scores are added and then the total is multiplied by two. Cut-off scores for the stress subscale range from normal (0-14), mild (15-18), moderate (19-25), severe (26-33), and extremely severe (34+).
Well-being Measures

Life Satisfaction. The Satisfaction with Life Scale (SWLS; Diener et al., 1985) is a 5-item self-report measure that is used to assess life satisfaction. Items are rated on a 7-point Likert-type scale (1 = strongly disagree to 7 = Strongly agree), with a possible score range from 5 to 35. Items include “In most ways my life is close to my ideal”, “The conditions of my life are excellent”, “I am satisfied with my life”, “So far, I have gotten the important things I want in life”, and “If I could live my life over, I would change almost nothing.” Internal reliability as assessed by inter-item correlations ranged from .61 -.81 (Diener et al., 1985); subsequent research found Cronbach alphas of .86-.89 (Adler & Fagley, 2005; Pavot & Diener, 1993; Steger et al., 2006).

Quality of Life. The Quality of Life Scale (QOLS; Burckhardt & Anderson, 2003) is a 16-item self-report measure used to measure five domains: material and physical well-being, relationships with others, social, community and civic engagement, personal fulfillment or development, and recreation (Burckhardt & Anderson, 2003). The original QOLS by Flanagan (1978) contained 15-items. An additional question was added to assess independence (Burckhardt & Anderson, 2003). Items are rated on a 7-point Likert-type scale (1 = terrible to 7 = delighted), with a possible score range from 16-112 (Burckhardt, 1989; Burckhardt & Anderson, 2003). Sample items are “expressing yourself creatively” and “participating in active recreation.” Higher scores indicate increased quality of life. The QOLS has three factors: (1) relationships and material well-being, (2) health and functioning, and (3) personal, social, and community commitment (Burckhardt & Anderson, 2003). Internal reliability as assessed by inter-item correlations ranged from .82 -.92 (Burckhardt et al., 1989); subsequent research found Cronbach’s alphas of .82 -.92 (Anderson, 1995; Archenholtz et al., 1999; Friðriksdóttir et al., 2011; Neumann & Buskila, 1997; Wahl et al., 1998).

Work-life Balance. The Work–Life Balance Scale (WLB; Brough et al., 2009) is a 4-item self-report measure that is used to measure the ability to balance work and non-work life. Items are rated on a 5-point Likert-type scale (1 = strongly disagree to 5 = strongly agree), with a possible score range from 4 to 20. Items include “I currently have a good balance between the time I spend at work and the time I have available for non-work activities”, “I have difficulty balancing my work and non-work activities”, “I feel that the balance between my work demands and non-work activities is currently about right”, and “Overall, I believe that my work and non-work life are balanced.” Higher scores indicate an increased ability to balance work and non-work activities. Internal reliability as assessed by inter-item correlations ranged from .84 -.94 (Brough et al., 2009), and subsequent research found Cronbach’s alphas of .81 -.94 (Chan et al., 2016; Devi & Rani, 2012; Malik et al., 2010; Shukla & Srivastava, 2016; Timms & Brough, 2013).

Demographic Measures

Participants were asked about gender, race, ethnicity, work status (full-time or part-time) and role at the institution. Participants could identify themselves as faculty, staff, or other; if faculty they were additionally asked if they were tenure track, non-tenure-track, clinical faculty, or research faculty. A final question asked if they worked in physical or behavioral health if they were a clinical faculty member.

Procedure

All procedures in this study were reviewed and approved by the UT Tyler Institutional Review Board (IRB). Participants accessed the anonymous survey link via employee-wide bulletin e-mails and read the informed consent document, choosing to proceed in the Qualtrics survey if they agreed to participate. They then completed the life satisfaction, quality of life, work–life balance, psychological distress, and demographics items. The survey ended by thanking participants for their time and offering a second survey link that asked participants to identify themselves if they wanted entry into a local spa gift card raffle and/or to be contacted again for a follow-up focus group study.

Participants Who Qualified for the Current Study

Of the 330 individuals who completed some portion of the survey, 299 participants qualified for the DCM health analysis based on completing the two PHQ anxiety items and all SWLS items (n = 181 staff, n = 100 faculty, n = 13 “other”, and n = 5 did not report role). Four DCM groups (high and low anxiety crossed with high and low life satisfaction) were formed:

1. low anxiety–high life satisfaction (n = 103, 34.4%);
2. low anxiety–low life satisfaction (n = 46, 15.4%);
3. high anxiety–high life satisfaction (n = 51, 17.1%);
4. high anxiety–low life satisfaction (n = 99, 33.1%; e.g., Carver et al., 2021; Eklund, et al., 2010).

High anxiety was specifically defined as a score greater than or equal to 3 on the two PHQ anxiety items, and low anxiety as 2 or less. High life satisfaction was defined as at or above the median of 25 on the SWLS and low life satisfaction as 24 or below on the SWLS. Group means and standard deviations are found in Table 2.

### Table 2. Group means and standard deviations

<table>
<thead>
<tr>
<th></th>
<th>Hi LS</th>
<th>Hi LS</th>
<th>Lo LS</th>
<th>Lo LS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>SWLS</td>
<td>28.73</td>
<td>2.65</td>
<td>28.29</td>
<td>2.66</td>
</tr>
<tr>
<td>PHQ-Anx</td>
<td>1.05</td>
<td>0.84</td>
<td>4.16</td>
<td>1.07</td>
</tr>
<tr>
<td>PHQ-Dep</td>
<td>0.52</td>
<td>0.86</td>
<td>1.94</td>
<td>1.57</td>
</tr>
<tr>
<td>DASS-Stress</td>
<td>4.19</td>
<td>3.18</td>
<td>10.63</td>
<td>4.63</td>
</tr>
<tr>
<td>QOLS</td>
<td>89.07</td>
<td>10.84</td>
<td>85.65</td>
<td>10.04</td>
</tr>
<tr>
<td>WLB</td>
<td>16.61</td>
<td>3.25</td>
<td>15.82</td>
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</table>

Note. SWLS = Satisfaction with Life Scale. PHQ-Anx = anxiety items from PHQ-4, PHQ-Dep = depression items from PHQ-4, DASS-Stress = Stress subscale of Depression Anxiety Stress Scales, QOLS = Quality of Life Scale, and WLB = Work Life Balance Scale. Data in this table reflect the participants available for each scale.

### Results

**Quality of Life and Work-life Balance**

We predicted that high levels of anxiety would not uniformly be associated with lower levels of quality of life or WLB, and specifically that higher levels of life satisfaction would be associated with higher QOLS and WLB scores in line with a DCM of mental health. To test this hypothesis, a Group MANOVA was run with QOLS and WLB total scores as dependent measures. Descriptive statistics for questionnaire measures for all groups are presented in Table 2. An overall multivariate Group effect was evident, Wilks’ Lambda = .64, F(6, 528) = 22.15, p < .001, partial \( \eta^2 = .20 \).

Following the omnibus Group effect and our hypotheses, two univariate Group ANOVAs were conducted within high and low anxiety groups separately, with quality of life and WLB as the dependent measures and high and low life satisfaction as the grouping variable. Consistent with a DCM, within high anxiety, the high life satisfaction group reported higher quality of life (Figure 1), F(1, 136) = 57.04, p < .001, partial \( \eta^2 = .30 \), and WLB (Figure 2), F(1, 149) = 10.99, p < .001, partial \( \eta^2 = .07 \), than the low life satisfaction group. Also consistent with a DCM, within low anxiety, the high life satisfaction group reported higher quality of life (Figure 1), F(1, 132) = 34.21, p < .001, partial \( \eta^2 = 21 \), but not WLB (Figure 2), F(1, 147) = 2.47, partial \( \eta^2 = .017 \), p = .118, than the low life satisfaction group.

### Depression and Stress

We predicted that high levels of anxiety would not uniformly be associated with higher levels of stress and depression, in line with a DCM of mental health. To test this hypothesis, a Group MANOVA was run with the PHQ-4 depression subscale and DASS-Stress total scores as dependent measures. An overall multivariate Group effect was evident, Wilks’ Lambda = .49, F(6, 562) = 40.02, p < .001, partial \( \eta^2 = .30 \).

Following the omnibus Group effect and hypotheses, two univariate Group ANOVAs were conducted within high and low anxiety groups separately, with depression and stress as the dependent measures and high and low life satisfaction as the grouping variable. Partially consistent with a DCM, within high anxiety, the high life satisfaction group reported lower levels of depression symptoms than the low life satisfaction group (Figure 3), F(1, 148) = 11.83, p < .001, partial \( \eta^2 = .74 \), but stress did not differ between these high anxiety groups (Figure 4), F(1, 144) = 1.66, p = .200, partial \( \eta^2 = .01 \). Partially consistent with a DCM, within low anxiety, the high life satisfaction group reported less depression symptoms (Figure 3), F(1, 148) = 30.04, p < .001, partial \( \eta^2 = .17 \), but not stress (Figure 4), F(1, 141) = 3.03, p = .084, partial \( \eta^2 = .021 \), than the low life satisfaction group.
In an alternative dissection of the omnibus Group effect, two univariate Group ANOVAs were conducted within high and low life satisfaction separately with depression and stress as the dependent measures and high and low anxiety as the grouping variable. Within the high life satisfaction groups, the high anxiety group reported higher depression, $F(1, 152) = 51.84$, $p < .001$, partial $\eta^2 = .256$, and stress symptoms, $F(1, 150) = 100.68$, $p < .001$, partial $\eta^2 = .403$, than the low anxiety group. Within the low life satisfaction groups, the high anxiety group reported higher depression $F(1, 144) = 53.81$, $p < .001$, partial $\eta^2 = .117$, and stress symptoms, $F(1, 135) = 61.61$, $p < .001$, partial $\eta^2 = .315$, than the low anxiety group. These results are consistent with the unipolar as well as the broader DCM of mental health.

The present study investigated WLB, quality of life, depression, and stress using a DCM of mental health framework in staff and faculty reporting high or low levels of anxiety symptoms during the COVID-19 pandemic. This study adds to a nascent literature addressing how high levels of anxiety co-occur with indicators of well-being (e.g., Carver et al., 2021; Franken et al., 2018). We predicted high levels of anxiety would not uniformly be associated with lower levels of WLB and quality of life, in line with a DCM of mental health.

Our results generally supported a DCM for the well-being indicators measured in the present study. Quality of life was higher for individuals who reported higher levels of life satisfaction, irrespective of high or low anxiety levels. This finding stands in contrast to the unidimensional model which would suggest that high anxiety should be associated with lower well-being indicators. Similarly, WLB was higher for individuals who reported higher life satisfaction among individuals who reported high anxiety levels, but this finding was not true for individuals who reported low levels of anxiety. As noted previously, WLB has been shown to predict life satisfaction (Carrà, 2020), but its relationship to life satisfaction and well-being in general can be impacted by other factors. Thus, individuals with low anxiety and low life satisfaction may be experiencing low life satisfaction for reasons unrelated to WLB. Other factors that may impact WLB include job satisfaction and intrinsic motivation (ul Hasan et al., 2020). Other examples of variables that can impact one’s perception of WLB in relation to well-being include gender differences.

**Figure 1.** Quality of life by anxiety and life satisfaction

**Figure 2.** Work-life balance by anxiety and life satisfaction

**Figure 3.** Depression by anxiety and life satisfaction

**Figure 4.** Stress by anxiety and life satisfaction

**Discussion**

The present study investigated WLB, quality of life, depression, and stress using a DCM of mental health framework in staff and faculty reporting high or low levels of anxiety symptoms during the COVID-19 pandemic. This study adds to a nascent literature addressing how high levels of anxiety co-occur with indicators of well-being (e.g., Carver et al., 2021; Franken et al., 2018). We predicted high levels of anxiety would not uniformly be associated with lower levels of WLB and quality of life, in line with a DCM of mental health.

Our results generally supported a DCM for the well-being indicators measured in the present study. Quality of life was higher for individuals who reported higher levels of life satisfaction, irrespective of high or low anxiety levels. This finding stands in contrast to the unidimensional model which would suggest that high anxiety should be associated with lower well-being indicators. Similarly, WLB was higher for individuals who reported higher life satisfaction among individuals who reported high anxiety levels, but this finding was not true for individuals who reported low levels of anxiety. As noted previously, WLB has been shown to predict life satisfaction (Carrà, 2020), but its relationship to life satisfaction and well-being in general can be impacted by other factors. Thus, individuals with low anxiety and low life satisfaction may be experiencing low life satisfaction for reasons unrelated to WLB. Other factors that may impact WLB include job satisfaction and intrinsic motivation (ul Hasan et al., 2020). Other examples of variables that can impact one’s perception of WLB in relation to well-being include gender differences.
and need fulfillment (Gröpel & Kuhl, 2009; Ngamaba et al., 2023) and whether an individual must commute to work/school (Herman & Larouche, 2021), both of which were not investigated in this study but could be helpful to include in future studies.

Our results demonstrated that individuals with high levels of anxiety can simultaneously experience high or low levels of life satisfaction, quality of life, and WLB. These results conceptually replicate and extend upon previous studies, such as Carver et al. (2021) that have demonstrated the importance of examining well-being indicators among anxious samples. They found that high levels of anxiety and life satisfaction in college students were associated with higher levels of hope, grit, gratitude, self-focused positive rumination, and savoring of positive emotions than students reporting high levels of anxiety and low levels of life satisfaction. The present study extends this finding to a faculty and staff adult population using different measures of anxiety, life satisfaction, and well-being indicators and including a low anxiety group. Taken together, these results provide more confidence in the DCM and in continuing to explore how high levels of anxiety and life satisfaction may co-occur with other well-being indicators.

We also examined psychological distress indicators and hypothesized that high levels of anxiety would not uniformly be associated with higher levels of depression and stress, in line with a DCM of mental health. Our results partially supported this hypothesis. Specifically, the high anxiety groups, irrespective of life satisfaction, reported higher depression and stress scores than the low anxiety groups. At the same time, the high anxiety and high life satisfaction group reported lower levels of depression symptoms than the high anxiety and low life satisfaction group. Taken together, depression and stress symptoms were indeed higher in the high anxiety groups, consistent with a unipolar model—but not uniformly so. It is important to note here that the group means (see Table 2) for the depression and stress scores were in the “normal” ranges in both the high and low anxiety groups (Kroenke et al., 2009; Lovibond & Lovibond, 1995), despite these scores being statistically higher in the high anxiety group.

Limitations to our study include a self-selection bias—it is likely that only participants with more extreme or salient opinions about WLB agreed to participate. Additionally, due to the prominence of the researchers on campus—e.g., all authors were faculty senators, and the senior author was faculty senate President at the time of recruitment and data collection—some people may have either participated for this reason and/or not have been confident enough in their anonymity to participate or share their true feelings. Despite recruitment scripts that asked specifically for groups who were underrepresented in our research—such as ethnic and racial minorities, men, healthcare workers, and part-time employees—there was still relatively low participation from those groups. Thus, our sample may not have been representative of the UT Tyler employee community overall. Previous WLB research suggests that the following groups would have lower WLB: women compared to men, staff compared to faculty, people of color compared to white employees, and healthcare workers compared to non-healthcare workers. However, the current study did not reach our recruitment targets for most of the groups (N = 82 in each group required) to test those hypotheses with t-tests. Although we failed to recruit our target demographics in sufficient numbers for additional hypothesis testing, we received high participation from women, who typically face greater work–life balance challenges than men (Comer & Stites-Doe, 2006; Hogan et al., 2015; Pasamar et al., 2020; Rosa, 2022). Thus, we feel our sample was able to capture important trends in employee mental health, well-being, and WLB across the two campuses.

Additionally, we acknowledge the context of the timing of our study, which limits our internal validity. Our recruitment and data collection interval includes January 2021, when SARS-CoV-2 infections and hospitalizations—as well as deaths to a lesser extent—were peaking in Texas (New York Times, 2022). Although we framed our participants’ WLB challenges and anxiety in terms of the COVID-19 pandemic, other historical events may have contributed to high anxiety as well, particularly considering the January 6th capital riot (Reeves et al., 2021) that took place shortly before the beginning of the spring semester during which we collected data.

Due to the relatively high rates of anxiety identified in our sample (i.e., faculty and staff that would screen positive for anxiety on the PHQ-4), we recommend future research should explore how higher education employees navigate anxiety and other forms of psychological distress alongside other sources of resilience and well-being. Additionally, our work highlights how mental health consequences of work–life balance need to be considered by policymakers at higher education institutions. Finally, we recommend work–life initiatives (policies supportive of WLB) be strengthened for higher education employees to help reduce psychological distress and improve well-being.
Continuing to view employee mental health through a DCM may help further elucidate who would benefit most from different work–life initiatives (such as paid family leave and flexible work time and place).

**Compliance with Ethical Standards**

**Ethical Standards**
All procedures in this study were reviewed and approved by the UT Tyler Institutional Review Board (IRB).

**Declaration of Conflicting Interests**
The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Funding**
The author(s) received no financial support for the research, authorship, and/or publication of this article.

Received: August 22, 2022
Accepted: November 12, 2022
Published Online: November 17, 2022

**References**


Appendix A

Recruitment Details
In September 2021, the research team sent the following recruitment script to a staff member who was able to email the faculty and staff on both campuses. “The Work–Life Balance Professional Learning Community invites you to participate in an online survey about your experiences as an employee at UT Tyler. The study is about your good and bad experiences. Your answers will be completely anonymous. Please click here to access the survey: [survey link].”

The staff member then sent that script in a university-wide e-mail on September 22, 2021 and posted it in a recurring newsletter sent to all employees (on 09/27/21, 10/04/21, and 10/11/21). Data collection was then paused due to total responses having achieved a predetermined threshold. However, some faculty groups were underrepresented in the sample, so following modified IRB approval, the administrative staff member resent the survey link with a new recruitment e-mail on a university-wide message on 11/23/2022. It was also included in the same bulletin on the following dates: 11/21/21, 12/06/21, 01/17/22, 01/24/22, 01/31/22, 02/07/22, 02/14/22, 02/21/22, 02/28/22, 03/14/22, 03/21/22, 03/28/22, 04/04/22, 04/11/22, and 04/18/22.

The second recruitment script read, “The Work–Life Balance Professional Learning Community invites you to participate in an online survey about your experiences as an employee at UT Tyler. We especially invite people who did not participate in our previous survey. We welcome faculty and staff of color, more faculty members, health-care workers, and men. The study is about your good and bad experiences. Your answers will be completely anonymous. Please click here to access the survey: [survey link].”