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Quantifying perceived stress and burnout of NCAA division I athletic department support staff members

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ABSTRACT

Employment in collegiate athletics often involves a fast-paced, high-pressure, stressful environment for employees that may lead to the development of burnout. This study examined the perceived stress and burnout of support staff members (e.g., athletic training, marketing). Surveys were delivered to 15,513 current support staff members via email in August 2024 and March 2025. A total of 314 (2.02%) completed both surveys (35.63 ± 9.77 years; 49.5% female). Participants reported moderate perceived stress (PSS) (T1: 15.97 ± 6.39; T2: 16.40 ± 6.74), personal burnout (PB) (T1: 48.98 ± 18.86; T2: 50.03 ± 18.93), work-related burnout (WR) (T1: 48.78 ± 17.39; T2: 50.52 ± 17.15), and low client-related burnout (CR) (T1: 31.99 ± 19.30; T2: 36.01 ± 20.78). PSS was positively correlated with all three subscales of burnout at both time points. WR and CR were significantly greater in March. PSS and burnout did not differ by institution type (Power Four, Mid-major) or football responsibilities. However, individuals consistently interacting with student athletes reported greater PB (p=0.031). Age and years of experience were both positively correlated with changes in PSS and WR between time points. This study provided insight into the stress and burnout of all athletic department support staff, with previous work focused on athletic trainers alone. Administrators can utilize this information to understand the current well-being of their employees. By providing early intervention through resources (e.g., employee assistance programs) and departmental changes (e.g., staffing, work hours), administrators can aim to decrease the risk of burnout and related consequences.

Contribution/Originality: This study contributes to the existing literature regarding the stress and burnout of athletic department staff by expanding upon single studies focused on individual departmental units, and enhances the understanding of the current state of college athletics.

1. INTRODUCTION

Burnout, a psychological syndrome resulting from chronic interpersonal work stress, is well-documented in traditional helping professions (e.g., physicians, first responders) (Maslach, 1982). In recent years, burnout has been increasingly examined in other people-facing professions (e.g., journalists, retail). Burnout often involves emotional and physical exhaustion or fatigue due to the lack of resources needed to manage the demands of the job. High stress is a known predictor of burnout in many populations, including healthcare workers and first responders (Anders,

Willemin-Petignat, Rolli Salathé, Samson, & Putois, 2022; Chou, Li, & Hu, 2014; Fothergill, Edwards, & Burnard, 2004).

National Collegiate Athletics Association (NCAA) athletics provides a fast-paced, ever-evolving work environment for various support staff, including creative services (e.g., photography, graphic design), business, academics, healthcare, nutrition, and strength staff. While coaching staff responsibilities are generally well-understood by those outside college athletics, the demands placed on support staff are less understood and can vary greatly based on several factors (e.g., conference, role, team assignments, and administrative responsibilities). For example, the demands of a Power Four conference [i.e., Atlantic Coast Conference (ACC), Southeastern Conference (SEC), Big Ten Conference, Big 12 Conference] football athletic trainer will differ substantially from those of a ticket office employee at a mid-major institution. Athletic trainers at this level are responsible for all healthcare of approximately 100 student-athletes, including management of orthopedic and general medical conditions, appointment scheduling, and much more. In contrast, ticket office staff focus on customer service and ticket sales, which are particularly important for boosting and maintaining fan engagement at mid-major schools. While one supports individual student-athlete health and well-being, the other drives the financial success of the institution, both of which contribute to the competitiveness of the university and the student-athlete experience.

College athletics pose a high-stress, competitive environment for staff and student-athletes. Employees in various roles (e.g., athletic trainers, athletic directors, academic staff) have reported various stressors, including long nontraditional work hours, travel demands, performance expectations, and competing priorities (Dixon & Bruening, 2005; Hardin, Veraldo, Taylor, & Jilka, 2020; Hendrix, Acevedo, & Hebert, 2000; Stevens, Loudon, Yow, Bowden, & Humphrey, 2000). Certain roles (e.g., athletic trainers, coaches) have reported moderate stress levels in the literature, but many others remain unexamined (e.g., nutrition, compliance). Athletic trainers have repeatedly reported moderate perceived stress, ranging from 15.4 to 26.4 on the 10-item Perceived Stress Scale (PSS), and one study of NCAA coaches revealed an average PSS score of 15.4 (i.e., moderate) (DeFreese & Mihalik, 2016; O'Connor, O'Connor, McCarthy, & Singe, 2023; Wright, Walker, & Hall, 2023). The stressful environment for employees in the college athletics setting is problematic for a variety of reasons. Stressful work environments in sport organizations have been associated with the development of various consequences, including physical and mental health issues, as well as burnout, a known consequence in athletic trainers, academic staff, strength and conditioning staff, and sports information directors (Baker & Wilkerson, 2018; Chun, Sagas, & Wendling, 2022; DeFreese & Mihalik, 2016; Karabatsos, Malousaris, & Apostolidis, 2006; Snarr & Beasley, 2022).

Burnout among college athletics staff has gained recent attention, as a shift from amateurism and changes in NCAA legislation have increased demands on employees, resulting in significant turnover (Elliott, Williams, & Bunch, 2023; Goodman et al., 2010; Ray, 2023; Robinson, 2023; Snarr & Beasley, 2022). Dixon and Bruening (2005) identified key factors in the development of burnout among athletic department staff, including frequent staffing shortages, workload concerns, and distress related to achieving success. Most of the published literature in the collegiate setting has centered around athletic trainers and coaches, but a few singular studies have examined other staff roles. Studies of burnout among collegiate athletic trainers are consistent, reporting moderate burnout on multiple scales, including the Copenhagen Burnout Inventory (CBI) (DeFreese & Mihalik, 2016; Oglesby, Gallucci, Wynveen, Ylitalo, & Benson, 2020; Singe, Mydosh, Cairns, & Eason, 2023). CBI scores for athletic trainers have ranged from 55.0 to 66.4 for personal burnout, 50.0 to 63.9 for work-related burnout, and 32.9 to 53.9 for client-related burnout, supporting the moderate burnout found using other measures (Singe et al., 2023). One study of strength and conditioning staff utilized alternate CBI scoring (Personal: 2.58; Work-related: 2.57; Client-related: 2.32), which equated to moderate on each scale (Snarr & Beasley, 2022). Both athletic administrators (2.67 ± 1.31) and academic staff (2.52 ± 1.29) have reported moderate emotional exhaustion scores on the Maslach Burnout Inventory (Conkle, 2023; Gellock, 2019). Additionally, some studies report significant proportions of burnout among

underrepresented staff, such as sports information directors (Rubin, 2017; Rubin & Moreno-Pardo, 2018; Schneider & Hite, 2017).

Research has consistently linked factors such as high workload, changing demands of college athletics, and high work-related stress with increased levels of burnout among athletic department support staff (Gellock, 2019; Ray, 2023; Rubin & Moreno-Pardo, 2018; Schneider & Hite, 2017; Singe et al., 2023; Snarr & Beasley, 2022). Stress is a key contributor to the development of burnout, and perceived stress is one measure that has been strongly associated with burnout in various populations, including athletic department employees (Chun et al., 2022; DeFreese & Mihalik, 2016; Gellock, 2019; Hatfield & Johnson, 2012; Hendrix et al., 2000; Ray, 2023). Workload, assessed as the number of student athletes/patients and/or work hours, has been shown to significantly impact burnout in various populations (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Bakhamis, Paul III, Smith, & Coustasse, 2019; Singe et al., 2023). Results indicate that employees responsible for managing larger volumes of student athletes or patients are likely to experience greater stress and burnout (Aiken et al., 2002; Bakhamis et al., 2019; Singe et al., 2023). Individual demographics such as age, sex, and experience can also play a role in the development of burnout, although study results have been mixed. Some studies have identified a positive relationship (Cayton & Valovich McLeod, 2020; Stanetić & Tešanović, 2013), while others have identified a negative one (Brewer & Shapard, 2004). The impact of sex has also varied, but women are largely found to experience greater emotional exhaustion related to burnout than men (Maslach, 1982; Christina Maslach, Schaufeli, & Leiter, 2001; Naugle, 2009). These factors may influence the relationship between stress and burnout among athletic department support staff.

College athletics pose a high-stress environment for employees due to various stressors, both common and unique to college athletics. High-stress jobs are well-understood to increase the risk of burnout for employees. Despite this identified risk, large gaps continue to exist in the literature surrounding the stress and burnout of athletic department support staff. The purpose of this study is to quantify the current perceived stress and burnout of athletic department support staff. Additionally, this study aims to understand the impact of demographic and job factors on the burnout of athletic department support staff members.

2. MATERIALS AND METHODS

2.1. Recruitment

Participants were recruited from the 133 current NCAA Division I Football Bowl Subdivision (FBS) university athletic departments following IRB approval (#2207587). Emails were collected from the publicly available online athletic department staff directories of each university. To be included in the study, participants had to be 1) at least 18 years old, 2) employed full-time by an NCAA DI FBS institution's athletic department, 3) serve in a support staff role, and 4) have a publicly available university email address (i.e., .edu). Exclusion criteria included 1) being under 18 years old, 2) being employed in a part-time role (e.g., graduate assistant, fellow), and/or 3) being employed as part of a sport coaching staff.

Qualtrics, a web-based survey platform based in Provo, UT, was utilized to design and distribute surveys. Surveys were completed at two time points (i.e., August, March), coinciding with periods of high stress in collegiate athletic departments. Initial emails (i.e., August) were sent to 15,999 athletic department staff members, with 486 (3.04%) emails undelivered, resulting in 15,513 initial recruitment emails. August emails included the study description, criteria for participation, and the link to the initial survey. Initial questions were designed to confirm the inclusion criteria. Any participants who responded indicating they did not meet the inclusion criteria skipped ahead to the end of the survey. Follow-up emails containing the link to the second survey were sent in March to those who completed the August survey. Reminder emails were sent two weeks after each initial contact. Two contacts were utilized for each survey time point to minimize unnecessary emails to individuals who received a significant volume of unsolicited emails daily, in an effort to increase the likelihood of acknowledgment and completion of surveys.

Participants had four weeks to complete each survey. The research was conducted in accordance with the 1964 Declaration of Helsinki.

2.2. Experimental Protocol

Data for this study were collected utilizing a repeated-measures design over the course of the 2024–25 academic year.

2.3. Instrumentation

Demographics and Job Information**.** Fourteen questions were utilized to collect information about personal demographics and job characteristics. Participants were asked to provide their age, race, sex, and education level. Additionally, they were asked if they were full-time employees to confirm the inclusion criteria. Then, participants were asked to provide information regarding their university (e.g., name, conference), role (e.g., department, football responsibilities, athletes responsible for), and individual job information (e.g., years of experience, hours worked). Only average weekly hours worked in the past two weeks were collected at both time points; all other demographic and job questions were completed only in August.

Perceived Stress Scale (PSS). The PSS was developed by Cohen, Kamarck, and Mermelstein (1983) as a tool to examine the extent to which individuals perceive events as stressful, various studies examining different subgroups of college athletics staff have utilized the PSS (Carr, Madden, Kneavel, & Bowman, 2024; Kania, Meyer, & Ebersole, 2009; Tashman, Tenenbaum, & Eklund, 2010). In these samples, the PSS has proven to be a valid and reliable tool with strong test-retest reliability (all Cronbach's alpha > 0.70) (Chaaya, Osman, Naassan, & Mahfoud, 2010; Remor, 2006; Siqueira, Ferreira, & Romélio, 2010). This study utilized the 10-item version of the PSS, with participants indicating how often they felt or thought a certain way within the last month, from "0 – never" to "4 – very often." These scores are then summed to create an overall score, where higher total scores indicate greater perceived stress. The change in PSS between August and March was also calculated by subtracting August scores from March scores to assess how PSS changed in relation to key variables. The PSS was utilized at both time points (i.e., August, March).

Copenhagen Burnout Inventory (CBI). The CBI was developed by Kristensen, Borritz, Villadsen, and Christensen (2005) to examine a key component of burnout, namely emotional exhaustion or fatigue, by identifying and quantifying three causes: personal burnout (PB), work-related burnout (WR), and client-related burnout (CR). The CBI was designed to assess burnout in a broader population than the traditional Maslach Burnout Inventory. Nineteen items evaluate these three subscales by asking respondents to rate the frequency or severity of their experiences with each item. Participants respond on a 5-point scale ranging from "0 – Never/almost never or to a very low degree" to "100 – Always or to a very high degree." Scores are averaged for each subscale, with higher scores indicating greater levels of burnout. The Cronbach's alpha of the CBI has been reported as 0.946, indicating it is a reliable tool (Thrush, Gathright, Atkinson, Messias, & Guise, 2020). The change in the three CBI subscales between August and March was also calculated by subtracting August scores from March scores to assess how burnout changed in relation to key variables. The CBI was administered at both time points.

2.4. Statistical Analyses

SPSS version 29 (IBM® SPSS Statistics, IBM GmbH, Munich, Germany) was utilized to conduct all statistical analyses. Descriptive statistics were used to quantify perceived stress and all three burnout subscale scores, as well as to examine demographic and job factors (e.g., conference, football responsibilities). Changes in PSS and CBI scores across the academic year were calculated by subtracting T1 (i.e., August) scores from T2 (i.e., March) scores. Differences in PSS and CBI scores based on key variables (e.g., time, job factor, demographic) were examined using t-tests and ANOVAs. Simple linear regressions and correlations were employed to explore the relationships between age, years of experience, and key outcome variables (i.e., PSS, CBI). The significance level for all tests was set at $p <$

0.05, and all data are reported as mean ± standard deviation. An a priori power analysis was conducted with an effect size of 0.05, alpha set at 0.05, and power (1-β) of 0.80; the required sample size was determined to be 196 (Shin et al., 2014).

3. RESULTS

3.1. Demographics

A total of 824 (5.31%) responses to the initial survey in August 2024 were received. Of those, 157 responses were incomplete, and 30 did not meet the inclusion criteria. This resulted in 637 usable responses (4.11%) from the first survey. In March 2025, the second survey was sent to the 637 participants who completed the first survey; 409 participants responded, with 314 complete responses (response rate: 2.02%). The large attrition rate was not unexpected due to the intentional choice to sample participants during high-stress times of the year. To assess potential non-response bias, demographic and key outcome variables were compared between respondents and non-respondents. The comparison revealed no significant differences in age, gender, experience, hours worked, perceived stress, and all burnout subscales. This suggests that non-response bias is likely minimal. The average age of participants was 35.63 ± 9.77 years, with an average of 11.03 ± 9.01 years of experience. Eighty-three percent reported possessing a graduate degree. From the final sample, 49.5% were female, and participants self-identified as primarily white/Caucasian (87.3%). Specific job and employer factors can be found in Table 1.

Table 1. Participant job factors.

Variable	Mean ± SD
Number SA is responsible for	136.07 ± 150.10
Hours per Week T1	48.85 ± 13.61
Hours per Week T2	52.44 ± 11.13
	n (%)
Power 4 vs Mid Major	
Power 4	225 (71.7)
Mid Major	89 (28.3)
Student Athlete Responsibilities	
Direct SA Services	182 (58.1)
Indirect Services	132 (41.9)
Football Responsibilities	
Yes	148 (47.1)
No	164 (52.6)

Note: SA = Student athlete

3.2. Stress and Burnout Scores

Average PSS, PB, WR, and CR scores of support staff members can be found in Table 2. At both timepoints, average PSS scores indicated a moderate (i.e., 14-26) level of perceived stress. Both WR (p=0.016) and CR (p<0.001) burnout were significantly greater in March when compared to August. No significant differences were present in PSS or PB scores. Female support staff reported significantly higher PB (p=0.004) and WR (p=0.028) in March compared to males. No differences existed between sexes in PSS or CR at either time point.

Table 2. Participant Stress and Burnout Scores.

Variable	August (T1)	March (T2)	t	P value
Perceived Stress	15.97 ± 6.39	16.40 ± 6.74	-1.461	0.145
CBI - Personal	48.98 ± 18.86	50.03 ± 18.93	-1.333	0.183
CBI - Work	48.78 ± 17.39	50.52 ± 17.15	-2.424	0.016*
CBI - Client	31.99 ± 19.30	36.01 ± 20.78	-4.160	<0.001*

Note: CBI = Copenhagen burnout inventory
Mean ± SD
* p<0.05.

At both timepoints, PSS, PB, WR, and CR scores did not differ based on conference affiliation (i.e., Power Four, mid-major) of the employing university or football responsibilities of the staff member. However, support staff members whose jobs involved direct student-athlete interactions (e.g., athletic trainers, nutrition, academic services) reported significantly greater PB than those whose jobs did not (e.g., ticket office, creatives) in August (p=0.031), but not in March. No differences existed in PSS, WR, or CR based on direct or indirect interactions.

3.3. Correlations

Correlations between key variables can be found in Table 3 and Table 4. As expected, the correlation between age and years of experience was significant (r=0.883, p<0.001). PSS was positively correlated with all three components of burnout at both timepoints. Support staff's average weekly hours worked were also found to be significantly correlated with PSS and PB in August, and PSS, PB, WR, and CR in March.

Age was positively correlated with the change in both PSS and CR scores, indicating that older individuals experienced a greater increase in stress and CR scores over the academic year. Similarly, years of experience were also positively correlated with a change in PSS and WR. Surprisingly, the number of student athletes supported by staff members responsible for did not significantly correlate with any stress or burnout outcomes.

Table 3. Perceived stress, burnout, and average weekly hours: Pearson's correlation coefficients.

August (T1)					
Variable	**PSS (r)**	**CBI – PB (r)**	**CBI – WR (r)**	**CBI – CR (r)**	**Hours (r)**
PSS	1.00				
CBI - Personal	0.741*	1.00			
CBI - Work	0.641*	0.746*	1.00		
CBI - Client	0.517*	0.496*	0.618*	1.00	
Hours	0.192*	0.209*	0.110	-0.016	1.00
March (T2)					
Variable	**PSS (r)**	**CBI – PB (r)**	**CBI – WR (r)**	**CBI – CR (r)**	**Hours (r)**
PSS	1.00				
CBI - Personal	0.705*	1.00			
CBI - Work	0.630*	0.739*	1.00		
CBI - Client	0.523*	0.538*	0.639*	1.00	
Hours	0.167*	0.145*	0.163*	0.135*	1.00

Note: PSS = Perceived stress scale; CBI PB = Copenhagen burnout inventory personal burnout; CBI-WR = Copenhagen burnout inventory work-related burnout; CBI-CR = Copenhagen burnout inventory client-related burnout
* p<0.05.

Table 4. Change in perceived stress and burnout: Pearson's correlation coefficients.

Variable	**Age (r)**	**Years' experience (r)**	**Number SAs (r)**	**Δ PSS (r)**	**Δ CBI PB (r)**	**Δ CBI WR (r)**	**Δ CBI CR (r)**
Age	1.00						
Experience	0.883*	1.00					
Number SAs	0.227*	0.101	1.00				
Δ PSS	0.147*	0.115*	-0.011	1.00			
Δ CBI PB	0.111	0.106	0.115	0.474*	1.00		
Δ CBI WR	0.119*	0.117*	0.081	0.383*	0.511*	1.00	
Δ CBI CR	0.116*	0.098	0.109	0.299*	0.271*	0.451*	1.00

Note: PSS = Perceived stress scale; CBI PB = Copenhagen burnout inventory personal burnout; CBI WR = Copenhagen burnout inventory work-related burnout; CBI CR = Copenhagen burnout inventory client-related burnout; SA = Student athlete
* p<0.05.

3.4. Regressions

Results of simple linear regressions can be found in Table 5. Age was found to significantly predict PSS, WR, and CR scores. Similarly, years of experience significantly predicted PSS and WR scores.

Table 5. Perceived stress and burnout: simple linear regression.

Variable	Age			Years of experience		
	Estimate	SE	p	Estimate	SE	p
Δ PSS	0.088	0.035	0.013*	0.075	0.037	0.044*
Δ CBI PB	0.158	0.083	0.059	0.164	0.087	0.062
Δ CBI WR	0.157	0.077	0.042*	0.167	0.080	0.038*
Δ CBI CR	0.203	0.102	0.048*	0.187	0.107	0.082

Note: PSS = Perceived stress scale; CBI PB = Copenhagen burnout inventory personal burnout; CBI WR = Copenhagen burnout inventory work-related burnout; CBI CR = Copenhagen burnout inventory client-related burnout.
* $p<0.05$.

4. DISCUSSION

The purpose of this study was to quantify the current stress and burnout levels of the FBS university athletic department support staff. These employees are exposed to significant occupational stress that predisposes them to various consequences (e.g., burnout, turnover), making them a population of concern. Participants consisted of NCAA DI FBS university athletic department staff members working in a variety of departments, including athletic training, academics, administration, compliance, and many others. The results noted that these staff members reported moderate perceived stress. Burnout was also found to be moderate for personal and work-related aspects, and low for client-related aspects. Personal burnout is considered the "general" burnout unrelated to specific demands. Work-related burnout is related to an individual's work, whereas client-related burnout is specifically related to work with clients, in this case, student athletes (Kristensen et al., 2005). The athletic department support staff members responsible for daily direct student-athlete interactions (e.g., athletic trainers, academics, and strength and conditioning) reported significantly greater burnout than those who do not directly interact with student-athletes. Various demographic and job factors, including sex, age, experience, and average weekly hours worked, also significantly impacted stress and burnout among this sample of athletic department support staff.

PSS scores in the current study were found to be 15.97 ± 6.39 in August and 16.40 ± 6.74 in March, indicating moderate perceived stress across the sample of staff employed in a wide range of support staff roles (e.g., compliance, academics). Despite this range of support staff, findings of this study support the previous findings that identified moderate stress among athletic department employees. PSS scores in this study were lower than those identified in previous studies of athletic trainers (23.00 ± 7.70; 19.02 ± 6.66) (Holton, 2022) but greater than other groups of staff (Coaches: 15.4 ± 6.3; Mental health staff: 14.7 ± 5.7) (Mullen, Blount, Lambie, & Chae, 2017; Wright et al., 2023). These scores all fall within the range of moderate perceived stress on the PSS (i.e., 14-26). The cause and timing of stress likely vary between individuals employed in diverse roles based on the specific demands. For example, football athletic trainers likely experience greater stress in August due to the high workload and long hours associated with football season. In contrast, sports information directors for basketball likely experience greater stress in March as they are preparing, traveling, and working for March Madness. Despite these differing demands, this study supports the notion that athletic department support staff are collectively exposed to significant stress, further supporting that stress should continue to be a concern among athletic departments. Chronic exposure to moderate stress can have significant negative consequences for an individual as well as the organization that employs them. Individuals chronically experiencing moderate to high stress are known to partake in poorer health behaviors (e.g., smoking, low physical activity), as well as be at an increased risk of depression, anxiety, and all-cause mortality (Lara-Cabrera, Betancort, Muñoz-Rubilar, Rodríguez Novo, & De las Cuevas, 2021; Ng & Jeffery, 2003; Nielsen, Kristensen, Schnohr, & Grønbæk, 2008). Additionally, individuals reporting high work-related stress also report greater absenteeism and decreased productivity at work (Gutman, 2020; Howard & Howard, 2020). This makes the moderate stress level reported by this sample of athletic department support staff a concern to administrators who are responsible for maintaining a well-functioning and properly staffed department to provide the ideal environment for student athletes and fans. If employees become less productive, more absent, or even quit, this places additional stress on other department employees, creating a cyclical issue within college athletic departments.

Significant positive correlations were identified between PSS and all three subscales of burnout at each time point, indicating that greater stress was associated with greater burnout across the academic year (all $p<0.001$). This supports findings from previous literature that stress, and particularly PSS scores, are significantly positively correlated with burnout in various fields, including healthcare and college athletics. These findings indicate that individuals experiencing greater perceived stress are also experiencing greater burnout. Factors known to contribute to support staff stress include long and unusual work hours, high workload, and competing demands. Strategies that can be implemented to modify these risks, such as limiting work-related travel and establishing consistent schedules, may help these employees decrease their stress levels and burnout. Due to the current concern of turnover among athletic department employees, understanding the current stress and burnout, as well as the relationship between the two, can inform those in positions of authority.

Support staff in this study reported moderate WR (T1: 48.78 ± 17.39; T2: 50.52 ± 17.15) and PB (T1: 48.98 ± 18.86; T2: 50.03 ± 18.93). CR was found to be low at both time points, indicating that the most taxing parts of participants' jobs were not interactions with "clients" (i.e., student athletes), but rather other work and personal factors that contributed more significantly to their burnout. Various studies have examined burnout in individual groups of support staff members (e.g., athletic trainers, academic staff) and identified moderate burnout (Hardin et al., 2020; Hatfield & Johnson, 2012; Oglesby et al., 2020; Snarr & Beasley, 2022). To date, limited research exists that examines athletic department staff as a whole. The findings of this current study suggest that athletic department support staff members are experiencing moderate burnout, particularly PB and WR. Thus, these individuals are at an increased risk of experiencing burnout-related consequences that include physical and mental health concerns, intention to leave, and absenteeism, potentially resulting in decreased productivity (Ahola et al., 2006; Garcia et al., 2020; Hämmig, 2018; Ybema, Smulders, & Bongers, 2010). Both WR ($p=0.016$) and CR ($p<0.001$) were found to be significantly greater in March compared to August. Anecdotally, March is a stressful period for athletic departments as demands of all three sport seasons overlap, including the beginning of conference competition for spring sports, post-season for winter sports, and spring season competitions for fall sports. As the majority of athletic department employees have responsibilities with multiple sports teams, this period of time can be taxing on their physical and emotional resources to manage the high levels of stress experienced, leading to higher rates of reported burnout.

Demographic factors play a role in the development and experience of burnout among working individuals. The present study examined the relationship between age, experience, and the change in PSS and CBI scores over two time points. Findings indicate that older, more experienced individuals reported a significantly greater increase in PSS (Age: $B=0.088$, $r=0.147$, $R^2=0.022$, $p=0.013$; Experience: $B=0.075$, $r=0.115$, $R^2=0.013$, $p=0.044$), CR (Age: $B=0.203$, $r=0.116$, $R^2=0.014$, $p=0.048$), and WR (Age: $B=0.157$, $r=0.119$, $R^2=0.014$, $p=0.042$; Experience: $B=0.167$, $r=0.117$, $R^2=0.014$, $p=0.038$) over the course of the academic year, from August to March. Previous studies examining age and experience have yielded mixed results. Some studies on individual groups of athletic department staff have found these factors do not play a significant role in burnout compared to other important factors, while others have found that younger, less experienced employees tend to experience greater burnout (Kania et al., 2009). The current study was the first of its kind to examine these factors in relation to burnout among athletic department support staff as a whole, and the findings were counter to what previous literature in this setting has shown. The positive relationships identified between age and experience and the change in PSS, CR, and WR in the current study indicate that older, more experienced individuals do not possess the same level of resources to manage the cumulative stressors across the academic and athletic year as younger, less experienced employees. Additionally, older, more experienced employees may be taking on more responsibilities at work, contributing to greater stress and burnout. These findings reveal that the lack of literature examining these variables in large portions of athletic department support staff misses a key positive relationship between age, experience, burnout, and stress. Regarding sex, female support staff reported significantly greater PB ($p=0.004$) and WR ($p=0.028$) compared to male staff in March, which supports the currently available literature. Previous studies have found that women working in athletic departments and healthcare

generally report greater PB and WR compared to male employees (Fernando & Samaranayake, 2019; Snarr & Beasley, 2022). PB serves as the "general" physical and emotional fatigue experienced by an individual. Findings may indicate that outside of work demands (e.g., work-life conflict, children) may play a larger role for women than men. Additionally, women may be working in roles that predispose them to greater WR or may take on additional tasks that contribute to WR (e.g., service activities, departmental roles). Understanding the increased burnout experienced by female support staff may allow for additional support and early intervention for women experiencing burnout.

Various job factors were examined to determine their impact on burnout among athletic department support staff. Work hours are known to significantly contribute to the development of burnout in various occupational settings. This was supported by the findings of this study, which identified significant positive correlations between weekly hours worked and PSS and PB in August, and PSS and all three subscales of burnout in March. This indicates that greater reported weekly work hours were associated with a significant increase in PSS and burnout between August and March. Previous studies have found that employees in both college athletic departments and healthcare reporting longer work hours experienced greater global burnout, emotional exhaustion, PB, and WR (Capel, 1986; Dall'Ora, Ejebu, Ball, & Griffiths, 2023; Shirom, Nirel, & Vinokur, 2010; Singe et al., 2023). Long and unusual work hours are a common occurrence in college athletics. Results of the present study suggest that the long and unusual hours common to the setting predispose support staff to increased stress and burnout. The hours an employee works in an athletic department are often controlled by external individuals or sources (e.g., coaches, media, weather), leaving little autonomy, matched with high demand, for employees. Support from administration and the implementation of departmental policies may assist support staff in modifying work hours to create consistency in scheduling and decrease the total number of hours, in the hopes of decreasing stress and burnout.

Athletic department employees working with the university football program are often assumed to face the greatest level of stress due to media visibility and administrative pressure for success, making it an important factor to consider in this study. Forty-seven percent of participants reported having responsibilities related to the football team or student athletes. No previous studies have examined the impact of football responsibilities on the stress and burnout of support staff. Interestingly, despite hypotheses to the contrary, no significant differences existed in PSS or any burnout subscale between those working with the football program and those who did not, even during the fall football season (all $p>0.05$). Despite beliefs that football creates the highest stress environment for employees, athletic department support staff members not associated with the football program are experiencing similar levels of stress and burnout, indicating the need for additional support for all staff, not just those managing football. Similarly, differences were examined between employees at "Power Four" conference institutions (n=225) (i.e., ACC, SEC, Big 10, Big 12) and mid-major conference institutions (n=89) (e.g., Mid-Atlantic Conference, Sun Belt). Demands at Power Four conferences are often thought to be significantly greater than those of mid-major institutions, but they also often possess greater resource availability. Again, no significant differences in PSS or burnout between employees at Power Four and mid-major FBS institutions (all $p>0.05$) were identified. Despite theoretically increased demands at Power Four institutions, the greater availability of staff and resources helps individuals to address those demands. In contrast, mid-major institutions may not experience the same level of demand but often lack the level of resources of Power Four universities. This supports the potential importance of the relationship between job demands and available resources of these athletic department employees and identifies the need for equal support for employees despite their employer. The final factor examined was whether employees were responsible for direct student-athlete interactions (n=182) as part of their daily role (e.g., athletic trainer, academic services) or if they had an indirect role (n=132) with the department (e.g., ticket sales, business office). Despite no significant difference between these groups in March, PB was significantly higher for individuals with direct student-athlete responsibilities in August ($p=0.034$). At the beginning of the school year, many staff members are preparing student-athletes for the beginning of athletic and academic demands, increasing the demand on those

directly interacting with student-athletes more than those behind the scenes. Individuals in direct student-athlete interaction roles may need greater support from supervisors and administration.

5. LIMITATIONS AND FUTURE DIRECTIONS

This study is one of the first, to our knowledge, to explore the stress, burnout, and related factors of a large sample of athletic department support staff, encompassing individuals from diverse educational and employment backgrounds. One strength of this study was the complete sample recruited from all 133 FBS university athletic departments, allowing for a large sample. A limitation is the use of a population that is already overworked, under high stress, and likely burnt out. This population provides a strong group to examine these relationships, but responses may have been limited due to the demand of placing additional responsibilities on these individuals' plates. To counteract this, measurements were limited to only two time points throughout the year, and adequate time was allowed to complete each survey. Additionally, the survey length was kept as minimal as possible. Future studies should aim to develop and implement realistic intervention strategies to assist staff with mitigating occupational stress to limit negative consequences such as burnout and the intention to leave.

6. CONCLUSIONS

The current study provided important insights into the stress and burnout levels among NCAA Division I FBS university athletic department support staff members. Similar to previous studies of individual groups of support staff, participants reported moderate perceived stress scale (PSS), personal burnout (PB), and work-related burnout (WR), as well as low CR, indicating that interactions with student athletes are not the most taxing aspect of these individuals' roles. Various factors yielded significant findings, including no differences in stress or burnout between Power Four and mid-major employees or based on university football program responsibilities. Employees who interact with student athletes daily were found to experience significantly greater burnout than their counterparts who do not. This study offers valuable insights into the current state of support staff working in Division I college athletics and can inform administrators and stakeholders. This information can be used to develop strategies aimed at reducing stress and burnout among athletic department staff, thereby increasing overall well-being and decreasing high turnover rates.

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Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
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