Athletic Trainers’ Stress, Support, and External Pressures when Making Clinical Decisions

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**Athletic Trainers’ Stress, Support, and External Pressures when Making Clinical Decisions**

Stephanie Carr MS, ATC, LAT†; Meredith Madden EdD, LAT, ATC, CHSE, PNAP‡; Meredith Kneavel PhD§; Thomas G. Bowman PhD, ATC‖

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**Context:** Athletic trainers (ATs) work in various settings with very different work environments and patient populations. How stress, social and organizational support, and external pressures alter athletic training decision-making remains unknown. **Objective:** Determine the relationship between workplace stress, social support, and organizational support for ATs who are providing healthcare. **Design:** Concurrent mixed methods. **Setting:** Online survey. **Patients or Other Participants:** 275 (7% response rate; 76 females, 44 males, 1 third gender/self-identify, 154 wished not to disclose; age=36.80±11.9 years, experience =13.65±12.55 years) ATs. **Interventions:** The size (SSQ-N) and quality (SSQ-Q) components of the social support scale (SSQ) and the perceived organizational support scale (POSS) served as the independent variables. **Main Outcome Measures:** The perceived stress scale (PSS) served as the dependent variable in our multiple stepwise linear regression model. We also analyzed several qualitative questions using a general inductive approach with multianalyst triangulation and peer review as credibility strategies. **Results:** The combination of the POSS and SSQ-N scores explained 32.4% of the variance among PSS scores ($F_{2,144}=34.496, p<.001$). Both POSS ($t_{145}=-3.115, p=.002$) and SSQ-N ($t_{145}=-5.687, p<.001$) significantly contributed to the model, whereas SSQ-Q did not ($t_{145}=-.917, p=.361$). Consistent with the quantitative findings, there were 2 themes across open-ended questions: stress and support mechanisms. **Conclusions:** Participants with higher organizational and social support reported lower levels of stress illustrating the importance of supportive environments. Although some participants explained that no factors alter their clinical decision making, others noted various stakeholders increased stress levels. Additional stakeholders (family, friends, fellow ATs) provided support for ATs during stressful times. **Key Words:** perceived stress, organizational support, support mechanisms

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**INTRODUCTION**

Athletic trainers (ATs) are healthcare providers who treat the overall health needs of physically active patients. ATs provide healthcare through the ability to recognize, diagnose, treat, refer, and rehabilitate conditions and injuries of their patients. ATs work in a variety of settings with different organizational environments. Athletic training settings include secondary schools, colleges or universities, industrial sites, clinics/hospitals, and others that are emerging (e.g., performing arts, military).

Organizational support theory proposes that people form a general opinion about how much their organization cares about them, which influences job performance and a number of other factors. Perceived organizational support can be influenced by organizational leadership, employee–organization context, human resource practices, and working conditions. Employees who perceive positive organizational support have been shown to meet or exceed performance expectations and maintain higher levels of well-being. In an athletic training context, perceived pressure from stakeholders, role conflict, role ambiguity, and the number of patients in direct care are among some of the factors contextualized as antecedents of the...
employee-organization context and employee stress levels which contribute to well-being. Therefore, organizational support can alter employee well-being. The National Athletic Trainers’ Association (NATA) has developed a position statement advocating for work-life balance outlining effective organizational communication, job sharing, emotional support, and recognition and reward for effort, all of which encompass positive organizational support.

Research has suggested that perceived organizational support influences the relationship between job stress and burnout. The potential for burnout in ATs has been present and has likely grown over the last several years, in part due to excess strain from the global pandemic. Stress and burnout levels have been found to be elevated in ATs due to various factors such as increased emotions (e.g., despair, isolation, exhaustion, and overwhelmed). Additionally, medical concerns (e.g., high blood pressure, depression, anxiety), worksite absenteeism, and decreases in the quality of one’s health increase stress and burnout among ATs. ATs working in Division 1-A athletics have greater levels of stress and higher burnout rates than ATs working in secondary school, youth sport, clinical, or industrial settings. However, the clinical and industrial settings had higher occupational engagement than the other 2 settings, suggesting a lack of clinician burnout. Perceptions of stress and social support have been found to be cornerstones of burnout for ATs at various practice settings. Further, ATs who work in the collegiate setting perceive the external pressures they face are based on the severity of the injury and situational factors when making clinical decisions.

While a number of studies have evaluated burnout and work-life balance in ATs, the primary purpose of our study was to determine the relationship between workplace stress, social support, and organizational support for ATs who were providing healthcare. The secondary purpose of our study was to determine ATs’ perceptions of how organizational pressures including administrators, coaches, parents, and/or patients influence clinical decision making. The research questions explored the following: (1) What is the perceived relationship between ATs’ stress, their social support, and organizational support?, and (2) Which organizational factor(s) are perceived to impact ATs’ clinical decision-making? We hypothesized that higher levels of social and organizational support would lead to lower stress levels. We also expected multiple stakeholders to alter stress levels which may alter clinical decision making.

METHODS
Our study utilized a concurrent mixed-method design. The concurrent mixed method design allowed us to gather breadth and depth simultaneously, providing a more holistic understanding of stress, support, and external pressure. We used 3 previously validated surveys: social support questionnaire (SSQ), perceived stress scale (PSS), and perceived organizational support scale (POSS) as well as open-ended questions to answer our research questions and meet our purpose.

Participants
The NATA research service sent our survey to 4,000 randomly selected NATA members; 275 ATs participated (7% response rate; 76 females, 44 males, 1 nonbinary/third gender, and 154 wished not to disclose) in our study by completing the online questionnaire via Qualtrics (Seattle, WA). The average age of participants was 36.80±11.9 years old with the average years of work experience of 13.65±12.55 years. Our participants practiced throughout the United States, while a participant practiced in another country (Dominican Republic). Table 1 contains the work settings of our sample population. The inclusion criteria included certified ATs who...
were currently providing healthcare to patients in any setting. The exclusion criteria included anyone who was not certified or ATs who had not treated patients within the three months prior to data collection.

We used the PSS-10, a 10-question inventory where each question has a time frame of “within the last month” from the date of the survey. PSS contains 10 statements about perceived life events and asks participants to respond how often they felt or thought a certain way about the events in the past month. Participants responded using a 5-point Likert scale (0=never, 1=almost never, 2=sometimes, 3=fairly often, 4=very often) with traditional coding for questions 1, 2, 3, and 6, and reverse coding for questions 4, 5, 7, and 8 (e.g., Likert scale of "4" = 0 points). We calculated a composite score for the PSS-10 by adding the response scores for all questions. Cohen et al found an α of 0.78 for the 10-question version. Higher stress levels result in higher PSS-10 total scores and vice versa. The total range was 0-40; less than 13 has been described as low stress, 14-26 as moderate stress, and more than 27 considered high stress.

The POSS-8 is an 8-question survey that measures organizational support within the participant’s organization. The POSS asks how the participant feels about the support of their organization they work in. The POSS-8 is scored on a 7-point Likert scale (1=strongly disagree, 2=slightly disagree, 3=disagree, 4=neutral, 5=agree, 6=slightly agree, 7=strongly agree). Questions 1, 4, 6, and 8 are scored in the traditional coding method. The other 4 questions (2, 3, 5, and 7) are scored with reversed coding method. Worley et al found an α of 0.93 for the POSS-8. We created composite POSS scores by adding the responses to all 8 questions for each participant.

After writing a draft of additional qualitative questions to include in the survey with research team input, we conducted a content validity check of the qualitative questions with 2 experts in the field. We selected the 2 experts based on publications in the areas of stress, social support, burnout, and/or work-life balance to provide content validity using a

<table>
<thead>
<tr>
<th>Work Setting</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collegiate Sports</td>
<td>41</td>
</tr>
<tr>
<td>Secondary Schools</td>
<td>52</td>
</tr>
<tr>
<td>Professional Sports</td>
<td>4</td>
</tr>
<tr>
<td>Industrial</td>
<td>3</td>
</tr>
<tr>
<td>PRN contract AT</td>
<td>1</td>
</tr>
<tr>
<td>Clinic, Hospital, and/or Physician Office</td>
<td>15</td>
</tr>
<tr>
<td>Military</td>
<td>1</td>
</tr>
<tr>
<td>Fire Department</td>
<td>1</td>
</tr>
<tr>
<td>Combination of Settings</td>
<td>2</td>
</tr>
<tr>
<td>No response</td>
<td>155</td>
</tr>
</tbody>
</table>

Table 1. Work setting results among our participants

**Instrument Development**

The qualitative section included questions from 3 previously validated surveys: the social support questionnaire (SSQ), perceived stress scale (PSS), and perceived organizational support scale (POSS). The 6-question SSQ included 2 composite scores: a quality section and a size section. The Social Support Quality (SSQ-Q) was scored by totaling the satisfaction scores to 6 statements on a 5-point Likert scale (1=very satisfied, 2=satisfied, 3=neutral, 4=dissatisfied, 5=very dissatisfied). The Social Support Size (SSQ-N) was scored by adding the total number of individual(s) listed as being supportive for the scenario provided across the 6 statements. Sarason et al found an α ranging from 0.90 to 0.93 for both sections of the SSQ.
4 point Likert scale (4= very/highly, 3=quite, 2= somewhat, and 1= not relevant, clear, or important). Each qualitative question needed to score a 3 or greater on the content validity checked in 3 areas: relevancy, clarity, and importance. If a question averaged a score lower than 3, the question underwent editing based on feedback from the experts. Once the editing was finished, the questions underwent another expert content validity check to ensure all questions scored at least a 3 on all 3 metrics (relevancy, clarity, importance). Next, a pilot study was conducted with 2 ATs in different settings (high school AT and collegiate AT). We finalized the data collection instrument when the pilot testers provided no additional edits, after which the survey was sent out to prospective participants. Participants received 2 follow up emails as reminders 2 and 4 weeks after the initial request for participation. Table 2 lists the qualitative survey questions used in our survey.

Table 2. Qualitative Survey Questions

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>[1] What personal factor(s) (family stressors, friends, relationship, etc.), if any, help support your decision-making when returning patients back to function?</td>
</tr>
<tr>
<td>[2] What occupational factor(s) (coaches, employer, etc.), if any, help support your decision-making when returning patients back to function?</td>
</tr>
<tr>
<td>[3] How do these support(s) affect your decision-making process to return patients back to function?</td>
</tr>
<tr>
<td>[4] What personal challenge(s) (family stressors, friends, relationships, etc.), if any, have you faced when making decisions to return patients back to function?</td>
</tr>
<tr>
<td>[5] What occupational challenge(s) (coaches, employer, etc.), if any, have you faced when making decisions to return patients back to function?</td>
</tr>
<tr>
<td>[6] How do these challenge(s) affect your decision-making process to return patients back to function?</td>
</tr>
<tr>
<td>[7] In what ways, if any, do these challenge(s) affect personal aspects (stress, total health, etc.) of your decision-making process?</td>
</tr>
<tr>
<td>[8] How, if at all, do you prevent these challenge(s) from impacting or influencing your decision-making process of returning patients?</td>
</tr>
</tbody>
</table>

Data Collection Procedures
Following IRB approval by the host institution, the survey was uploaded into the NATA’s Qualtrics platform. In addition to email distribution via NATA’s research service, we also posted the link to the survey on various social media platforms (ie, Facebook, Twitter). The anonymous survey started with the informed consent form. Once the informed consent was accepted by clicking the “I agree” button, participants completed the P0SS-8, SSQ-6, and the PSS-10 in a counterbalanced order. Following the 3 surveys, participants completed 8 qualitative questions regarding clinical decision-making. The survey ended with 6 demographic questions.

Statistical Analysis
Quantitative
We analyzed the quantitative survey data using SPSS (version 28; IBM Inc, Armonk, NY). We used stepwise linear regression in an attempt to predict PSS scores from POSS, and SSQ scores from any surveys where participants completed all quantitative measures. We set the α to less than or equal to .05 a priori. We additionally evaluated the Pearson correlations between PSS, POSS, and SSQ variables.

Qualitative
We analyzed our open-ended responses using a general inductive approach. Two members of the research team (SC and TGB) completed multi-analyst triangulation as a credibility strategy by analyzing the responses independently and later meeting to negotiate over the coding structure and resulting themes of the study until they came to complete agreement. Any disagreements about the themes and coding structure were discussed until corroborated. Our negotiations centered around the nomenclature of the themes and subthemes rather than the content included. The coding process started with the raw data on a line-by-line basis followed by condensing the codes.
into categories and later themes. We had a peer review an example of a coded transcript and our coding structure as our second credibility strategy. The process included asking a trained qualitative researcher with extensive experience in the socialization framework to review the coding structure and verify the accuracy of the presentation of the results.

**RESULTS**

**Quantitative**
The combination of POSS and SSQ-N scores explained 32.4% of the variance among PSS ($F_{2,144}=34.496, p<.001$). Both POSS ($t_{145}=-3.115, p=.002$) and SSQ-N ($t_{145}=-5.687, p<.001$) significantly contributed to the model, whereas SSQ-Q did not ($t_{145}=-.917, p=.361$). Table 3 illustrates the means and standard deviations of all variables used in the quantitative section as well as the Person Correlations.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean (SD)</th>
<th>POSS</th>
<th>SSQ-N</th>
<th>SSQ-Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSS</td>
<td>18.07 ± 6.54</td>
<td>-.42***</td>
<td>-.53***</td>
<td>-.27***</td>
</tr>
<tr>
<td>POSS</td>
<td>35.87 ± 9.89</td>
<td>.42*</td>
<td>.17***</td>
<td></td>
</tr>
<tr>
<td>SSQ-N</td>
<td>25.31 ± 4.25</td>
<td></td>
<td>.39***</td>
<td></td>
</tr>
<tr>
<td>SSQ-Q</td>
<td>20.44 ± 12.91</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Table 3. Means and standard deviations for the variables and correlations among variables. [*P < .05, ***P < .001]

**Qualitative**

In the qualitative responses, we found 2 themes from our participants' responses: stress and support mechanisms. Stress had 2 subthemes, sources of stress and lack of stress. Support mechanisms had 2 subthemes, external support mechanisms and internal support mechanisms. The themes and subthemes are defined and supported by participant quotes below. Participants are identified by their unique participant number (e.g., #37) and their gender identity (e.g., F) to clarify that the statements which are presented are unique statements and to underscore the diversity of responses.

**Stress**
We divided the theme of stress into 2 subthemes following our analysis, sources of stress and lack of stress. Stress is defined as "an aversive, negative state in which coping and adaptation processes fail to return an organism to physiological and/or psychological homeostasis."\(^{18pg15}\)

**Sources of Stress**
Participants mostly described stress from outside sources that affected AT decision-making. The concerns and support levels of stakeholders (coaches, parents, employers, supervisors, and patients) in working environments led to increases in stress. A participant stated,

"Added stress [occurs] when taking in coaches’ concerns, athletes’ or the families’ concerns and making sure everyone is on the same page and has an understanding about the process and expectations" (#135, F).

Another participant stated,

"There is always stress when you are making the decision that is best for the athlete and not being influenced by the family, coaches, employer, scouts of the athlete, etc. Over time, these stressors can start to negatively affect your mental and physical health" (#213, M).
Participants identified administrators and coaches as having the greatest influence on clinical decisions. There are ways to prevent coaches/employers from impacting decision-making. A participant stated,

“Complete return must be with my consent, hopefully without interference from the coach/employer requesting a second opinion from a less restrictive professional. This is all done with the patient’s knowledge and agreement. Their input is essential to the process of assessing how they are progressing and the way their situation is being handled by the coach/employer” (#146, F).

However, some administrators do impact clinical decisions. A participant stated how her supervisor made decisions to avoid conflicts with parents, a common source of stress. She said,

“...There have been a couple of times my employer will make the decision about returning athletes to function to avoid making waves with parents” (#15, F).

Employer decisions about staffing size also factored into stress levels. Another participant stated she needed more assistance in the athletic training clinic to reduce stress but was denied by the administration. The participant explained,

“I have asked my employer to consider adding another AT to help decrease workload and stress. I was told no” (#9, F).

Employers from non-traditional or emerging settings can also create external stress. A participant agreed that employers impact clinical decisions. She stated,

“In an industrial setting, there was one company that preferred employees not go to a doctor but to try to work around the injury. However, once a person had been put on no duty or restrictive duty, the company was overly cautious of the employee returning to work sometimes keeping them out 1, 2, 3 weeks longer after they were released” (#146, F).

Participants also identified coaches as another external stressor. One participant stated,

“coaches will push a kid too far (and) when I hold them [patient] out, coaches tend to take it out on the kid” (#4, M).

Some participants noted coaches go behind the ATs’ backs to allow patients to return to function. Another participant stated,

“Makes me feel a little helpless when I’m trying to make the best decision for the athlete but know the coach can go behind my back to get the answers they want” (#20, F).

A participant agreed that coach(es) created extra stress on ATs’ decision-making by asking about patient availability from a game-planning perspective. She stated,

“The coaches are sometimes pushy, but they just wanted to know the status of the individual that they might want to play in the next game or match” (#6, F).

Another participant agreed that coaches added stress stating,

“Coaches with no medical background trying to tell you how it was in the old days [is stressful]” (#16, F).

Participants identified parents/guardians as another external stressor with clinical decisions. Parents/guardians wanted to see their child(ren) do what they love. A participant stated,

“There is stress with conflicting viewpoints. The most stressful is parents telling you, you
don’t have their kid’s best interest in mind. Or having to watch a parent or coach do what’s not best for the kid” (#74, F).

Another participant agreed that parents/guardians cause a stressful environment when returning patients back to function. She stated,

“It’s stressful. If I don’t feel a person is fully ready and they [parents] make a choice to override me. It’s frustrating. Especially if the parent goes shopping for a doctor to sign off or an adult decides they [patients] ‘feel’ good when the strength or mobility really isn’t there” (#5, F).

Some parents may not fully understand the injury that their child has or might not care about the severity of the injury and only want them to return to function. A participant stated,

“Parents who don’t believe in concussions or try to get around our state-mandated protocol give me a great deal of stress. Because not only is the athlete begging to play but why was the parent angry at you for something you can’t control. When all you’re doing is taking care of their child and their best interest” (#16, F).

A final stressor from parents/guardians identified by participants was handling care of minors with parents/guardians who were uninvolved with their child. These parents/guardians made getting patients to doctor appointments and/or physical therapy appointments difficult. A participant stated,

“Uninvolved parents of minors make it hard to get the care a patient needs” (#34, F).

There are some co-workers who can act as sources of external pressure which include support staff or other healthcare professionals, such as counselors, school nurses/health center personnel, and/or psychologists. One of the participants stated,

“The norm is outsiders pushing the patient to ‘get back as soon as possible.’ Pressure as the patient is letting down the team, this game is really important, as is each following game. Your project is almost due, I’m going to have to replace you unless you can… One of my favorites was a college counselor who wouldn’t approve a concussion patient’s missing further classes as ‘concussions only last a month.’ You have to really be dialed into this patient and their life to counteract some of the outside pressure” (#146, F).

Another participant agreed that other healthcare providers cause external stress. He stated,

“poor communication from medical providers” is a source of stress (#100, M). One participant stated that co-workers can cause unsupportive and stressful work environments. A participant reported that they have “toxic employers” which creates a negative occupational environment (#197, M).

Lack of Stress

Although most participants listed multiple stressors, some stated that personal and occupational factors did not affect their clinical decision-making. One of the participants stated,

“I don’t think these factors [occupational and personal factors] support my decision-making process, it’s about how the athlete is doing physically, what their body can handle, as well as what they are ready for mentally” (#135, F).

Another participant agreed that,

“I try not to listen to them [personal and occupational challenges] and remember that I am the healthcare professional in the
situation” (#56, F).

A third participant agreed that he did not let external pressures influence his decision to return patients back to function. He stated,

“I’m not sure you prevent them [personal and occupational challenges]. They are more than likely inevitable in this profession and life/work in general. I think you learn to work with them and adjust to them to make sure you have the best possible outcome for the patient” (#47, M).

The participants wanted patients to feel comfortable when returning to function, not pressured to return. One participant explained how she guarded patients against such pressure to return. She responded,

“I would stand my ground. If a kid is not ready, they’re not ready. I might have a kid go through some extra exercises or tests to validate my reasoning” (#74, F).

Another participant agreed that he does not let stressors influence his decisions. He said,

“if I feel either of those [occupational] factors are at risk, I make a decision to protect my patients, regardless of external pressures [occupational factors]” (#26, M).

Support Mechanisms
We defined support mechanisms as things that allowed participants to reduce stress levels. Support mechanisms fell into 2 subthemes: external support mechanisms and internal support mechanisms.

External Support Mechanisms
We defined external support mechanisms as outside factors that helped ATs reduce stress levels. Participants reported that they frequently relied on other individuals as support mechanisms when dealing with stress. One of the participants described how his family provided some assistance connecting with athletes since he did not participate in collegiate athletics:

“My spouse is a former collegiate soccer player so sometimes I’ll seek her advice on athletic ability” (#29, M).

Participants replied that fellow ATs were a common external support mechanism. ATs used fellow ATs to gain a different perspective, question themselves, and find answers to questions. A participant stated that other ATs provide her with

“other perspectives and ideas that don’t cross my mind”

and that helped her deal with the stress associated with decision-making (#64, F).

Coaches were another form of an external support mechanism for many of the ATs in our study. The results demonstrated that coaches have specific views when it comes to returning an athlete to participation but often support the ultimate decisions ATs make. A participant described how her coaches supported her decision-making when holding patients out of participation:

“...the coaches support me but also cheer the athlete on” (#18, F).

Organizational/institutional policies and procedures illustrated an external support mechanism that was used by many ATs. Policies and procedures can include documentation, the “rules” of the organization/institution, and mandated protocols. A participant stated strict policies and procedures do not allow for a misunderstanding of what is stated.

“Staying within the rules of the organization/league you are involved with” helped one participant (#47, M) who worked in professional sports make difficult decisions.
Another participant agreed and also stated that protocols aided in decision-making. She stated that

“protocols being too strict and not allowing gray area issues” supported her decision-making in the secondary school setting (#198, F).

Internal Support Mechanisms
We defined internal support mechanisms as personal factors that helped ATs reduce stress levels. The perceived confidence level that ATs did or did not have was the most common response for internal support mechanisms. One of the participants described that it

“certainly helps my confidence when I have support from coaches and administrators, but won’t dictate decisions” (#216, F).

Some participants stated that their perceived confidence level was influenced by the support the participants had surrounding them. A participant stated,

“They [coworkers] give me the confidence to make a decision and how it will be supported” (#213, M).

Improved confidence of the AT led to patients feeling more support and having more confidence in themselves to return back to function. A participant stated personal and occupational support

“gives me more confidence and also gives the patient more confidence to be able to solely focus on the work at hand” (#7, F).

Participants described work-life balance as another internal support mechanism for dealing with the stress associated with decision-making. Participants reported that communication assisted in making work-life balance effective among stakeholders. Communication allowed separation between the personal and professional aspects of life allowing all stakeholders to know when the AT is working and when the AT is not. One of the participants described how communication worked for her,

“At times I have been frustrated, but I have good communication with my coach and we have set boundaries” (#44, F).

Additional examples of things participants did to improve or maintain work-life balance were to “go to therapy,” and “have a consistent schedule” (#200, M).

Most participants had work-life balance methods that worked for them. Participants described the importance of keeping “personal lives separate from their work” (#197, M). One participant explained what she does when the two collide. She said,

“If I have personal challenges, I put them aside before I come into work. If I can't [prevent personal and occupational challenges from interfering with work responsibilities], then I need to seek counseling or take a leave of absence to take care of my [personal] issues” (#24, F).

The last internal support mechanism explored knowledge and experiences of ATs. Participants stated research/evidence-based practice (EBP), past experiences, achievement of the rehabilitation goals they have developed for patients, and “trusting the process of doing rehab/treatment to get back to play” (#200, M) aid in their decision-making for return to function.

Another participant agreed that,

“In the same way that they [previous experiences] help give you confidence, they can also cause you to second guess yourself. While sometimes that leads to more detailed thinking and more research to ensure the best method is being used, sometimes it feels unsettling and self-doubt
creeps in” (#47, M).

One participant stated they “refer back to research and knowledge” (#228, F) to aid in decision-making. A participant described how past experiences influence future decisions,

“...They [situations] may be similar, but none are exactly the same. You use what you've learned from previous encounters as references for future situations” (#146, F).

**DISCUSSION**

We aimed to determine workplace stress and social support among ATs and how external pressures influence clinical decisions of ATs. However, personality, coping skills, and more specific contextual or worksite variations may assist in reducing stress levels among ATs.19 Our hypotheses were mostly supported. We found an inverse relationship between PSS, POSS, and SSQ-N for our sample population. Specifically, increased organizational and social support size reduced AT stress levels. We expected the social support quality to also have an inverse relationship with perceived stress, as has been found in previous research with the general population.20 Based on our findings, we recommend that ATs develop social support networks that can assist them during times of high stress. In addition, organizational administrators should provide support for ATs’ clinical decisions as organizational support alters stress levels.

The relationship between stress and social support was also supported by the qualitative responses. Although some participants noted a lack of stressors when making clinical decisions, others noted external stressors such as interactions with stakeholders. Support mechanisms were either internal or external mechanisms for ATs. Internal mechanisms included mostly personal characteristics (e.g., confidence, experience, knowledge) while external mechanisms included family, friends, other ATs, and administrators.

**Stress**

We found that many of our participants had no stressors when making clinical decisions. Some participants believed no occupational or personal factors altered their clinical decisions as patients’ best interests were always most important. Most participants stated they did not let stressors alter their decisions and had higher support mechanisms for their personal and occupational lives. However, many participants stated that they experienced external pressure although these pressures did not alter their decisions. External pressures when making clinical decisions have been previously found in the collegiate setting as coaches increase pressure and stress on ATs when making medical decisions.2 Similar to our findings, communication and education facilitated reducing conflict with coaches about returning to play decisions.2 We also found that coaches acted as external stressors that could potentially influence AT decisions. Our findings are also supported by Lacy et al9 who found stakeholders (e.g., coaches, parents/guardians, administrators/employers) created external pressures for ATs within the collegiate setting. Specifically, interactions and concerns from stakeholders, work environments, and mental health changes for ATs have been found as stressors in previous research.9

Interestingly, our participants noted pressure and stress from stakeholders when making decisions despite the fact that clinicians should have unquestioned authority for all medical decisions.1 However, it is evident that ATs face pressure when making clinical decisions that increase stress levels across practice settings based on previous literature2,9,21,22 and our results. Although ATs should have unchallenged authority when it comes to medical decisions,1 enforcement appears to be problematic.2,9,21,22 How administrators practically implement policies requiring ATs to have final decision-making capabilities for all medical decisions are
unknown. However, clear reporting instructions and repercussions must be provided to allow administrators and ATs to enforce policies.

Support Mechanisms
Support mechanisms aided in providing ways to reduce stress and allow ATs to make decisions in which they can feel confident, despite the fact that the decisions may be challenged by some stakeholders. AT feelings were supported in both aspects of this study and in previous research.16 One study found external stressors may be reduced by strengthening the quality of relationships with members of support systems.20 It may be important to develop stress-reduction techniques to limit stressors and identify what causes individual stress.20 Our results support the previous findings that having a good support system will reduce stressors.4,20 Similar to our findings, Kenow20 argued that having fellow ATs provide new perspectives/ideas, coaches’ support of ATs’ decisions, and clear policies and procedures decreased stressors. Also similar to our findings, work-life balance, communication, knowledge/experiences of ATs, and ATs’ confidence levels have also been found to act as support mechanisms.4 The support strategies we found in the current study include having a supportive environment, separating work and personal life (e.g., communication, having a schedule, setting boundaries), and communication with stakeholders (e.g., coaches, family, friends, fellow ATs.). The strategies are all supported for ATs by the NATA position statement4 as mechanisms to improve work-life balance and Cayton’s systematic review on burnout.23 Additional NATA position statement work-life balance aspects that were not found in our study include having a mentor program for new hires, encouraging and promoting modified job sharing, providing social and emotional support, campaigning for a larger staff, and developing healthy lifestyle habits.4

Limitations and Future Research
Based on sample size estimates, we hoped to secure 377 responses to improve the generalizability of our findings based on a priori sample size calculations for survey research based on the size of the population (NATA members).24 Although we had a long data collection period, a larger sample size would improve the generalizability of the results. A larger sample size would have also allowed us to use demographic characteristics in our analyses. Future research should investigate stress, social support, and external factors when making clinical decisions in specific work settings. Further, future research could stratify data across age, gender identity, race/ethnicity, settings, experience level, and/or other demographic characteristics. Including such factors with a larger sample size may provide insight into which factors improve support or stress levels. Finally, future investigations should study ATs’ perceptions of policy support and their ability to enforce policies that are currently in place. Currently, it remains unknown if clinicians have less stress and are ultimately happier in their current positions if they perceive that the organizations’ administrations provide broad support for unquestionable medical authority and/or provide mental health support. Determining how administrative support alters AT stress may provide insight into actionable items aimed at improving workplace culture.

CONCLUSIONS
Participants with higher organizational and social support reported lower levels of stress illustrating the importance of supportive environments both in and out of work. Responses to open-ended questions added information that stressors and support mechanisms influenced how ATs made decisions. Various stakeholders caused stress (e.g., coaches, parents/guardians of patients, employers) whereas others provided social support (e.g., family, friends, fellow ATs). Additional information revealed that personal
characteristics (e.g., confidence, experience, knowledge) facilitated coping with stress. ATs should develop support networks both within the working organization and within their personal lives as mechanisms to improve coping during times of high stress.

REFERENCES
