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Athletic training centers and competition venues are important recruitment tools for colleges and universities, and they are often sources of significant investment. As these facilities have grown in size and scope in recent years, facility management is an increasingly vital cog in the athletic department. Unlike ticketing, marketing, or management strategies, the facility management staff is rarely studied. To understand the perceptions of athletic department facility operations staff, we administered online surveys to athletic facilities operations staff department heads at Football Championship Subdivision and non-football Division I institutions. For closed-ended items, descriptive statistics were computed, while NVivo was used to code empirical material and identify patterns for the short answer items. Findings indicated that athletic departments averaged one facilities operations employee for every two facilities. Facility issues arose mostly from budget cuts, small staff, and multiple responsibilities. Additionally, these issues were remedied by adding staff, prioritizing, and planning. In light of the heavy workload, practitioners recommended hiring interns, student workers, and graduate assistants to fill gaps. Practitioners also recommended strategic planning to help budget allocators understand needs within the department.

Keywords: facilities, staffing, collegiate athletics, administration, work–life balance

As college athletic programs compete for five-star recruits, lucrative television deals, and high-profile coaches, the case for more advanced and extensive training and competition venues for athletic programs continues to be made. Remaining competitive with peer institutions and conference rivals is key to maintaining (or elevating) a university's prestige, and the presence of modern, state-of-the-art facilities is a significant factor in attracting top recruits (Judge et al., 2014). Several new collegiate athletic facilities demonstrate how they may be used to attract student-athletes, including Clemson University's $55-million football training center, which includes an indoor water slide, bowling lanes, and a miniature golf course, and Northwestern University's $270-million Walter Athletics Center, the picturesque fieldhouse built on the edge of Lake Michigan (Greenstein, 2018; Hobson & Rich, 2015). Other institutions have aimed to increase their public profiles by launching football programs or moving to more profitable athletic divisions or conferences (Elliott & Kellison, 2019). While universities like Clemson and Northwestern have established, well-funded athletic programs, institutions with upstart athletic programs are more likely to experience budgetary constraints related to staffing and facility construction and management. In the latter case, colleges and universities may prioritize investment in new or upgraded facilities (cf. Hobson & Rich, 2015) over the hiring of additional staff, even as auxiliary facilities (e.g., practice and training centers) are acquired and managed by the athletic department.

In some instances, athletics facility staffing has not grown with the number of facilities in a university's portfolio. For example, in 2017, Georgia State University purchased Turner Field, the former home of the Atlanta Braves baseball team, in downtown Atlanta. Before the university moved operations of its nascent football program to the stadium, it rented the 71,000-seat Georgia Dome for home games. The Georgia Dome was owned and operated by the Georgia World Congress Center Authority, a public entity. However, after acquiring and converting Turner Field to a Division I football stadium, the university was responsible not just for the full-time maintenance of the 24,000-seat venue, but also its day-to-day management and operations. Despite these new responsibilities, there were no immediate changes made to the department's facilities operations staff (Georgia State Athletics, 2018). The lack of additional staffing to manage the new facility suggests the stadium has created additional demands on current athletic staff members.

The expansion of athletics programs may necessitate institutional investment in major sporting facilities and supporting infrastructure. Such investment may be seen as a prerequisite for revenue growth; during the initial stages of expansion, however, universities may face tight budgets, particularly when it comes to personnel. That is, as the number, size, and scope of sports facilities managed by a university grow, it is unclear whether the number of employees staffing these facilities has kept pace. As discussed in this study, an imbalanced workload for facilities managers can lead to significant problems for an athletic program, including dissatisfied employees and a higher risk of accidents.

In this study, we explore the current state of athletic department facilities and operations staffing. The purpose of this study is to examine the extent to which NCAA Division I facilities operations professionals perceive imbalances between staffing levels and facility oversight. Additionally, we assess how institutions plan for future staffing needs. By evaluating staffing perceptions in Division I Football Championship Subdivision (FCS) and non-football institutions, trends and best practices in facility management can be identified to limit the

organizational and operational challenges associated with understaffing. These challenges are discussed further below.

Literature Review

Facilities Operations Management

In the sport management literature, the relationship between the number and size of sporting facilities and staffing levels has not been the subject of much empirical investigation (e.g., Galluci & Petersen, 2017). A cursory review of sport management-grounded textbooks in organizational behavior (e.g., Chelladurai, 2014; MacIntosh & Burton, 2018; Skinner & Stewart, 2017), human resources management (e.g., Chelladurai & Kerwin, 2017), and facility management (e.g., Fried, 2015; Sawyer, 2013; Schwarz, Hall, & Shibli, 2015) suggests there are no standard rules of thumb when it comes to determining the optimal number of staff (including both full-time professionals and temporary workers). In any case, sport managers are advised to conduct a staffing needs assessment. According to Chelladurai and Kerwin (2017), "factors such as an organizational plan to expand (or contract) or projected requirements in the near future have an influence on staffing requirements" (p. 191) and would, therefore, be weighed in a needs assessment. Given the lack of industry standards for staffing, athletic administrators may rely on their own experience, knowledge, training, or intuition to determine proper staffing numbers.

The role of the facilities operations staff in a college athletic department is critical, yet there is little research on these staff members. Researchers have assessed the challenges facing athletic directors, marketing staff, and sports information professionals (Mazerolle & Eason, 2014; Mazerolle, Eason, Lazar, & Mensch, 2016; McCarthy, 2015) within the college athletics environment. Furthermore, researchers have studied customer satisfaction with the facility at events due to its impact on the common goal of revenue generation. For example, venue accessibility is a crucial market demand factor leading to increased attendance (Cianfrone, Zhang, Pitts, & Byon, 2015). This market demand may lead athletic departments to invest more heavily in facilities and infrastructure, even if they might not have the staffing capacity. If the possibility of revenue generation is driving new facilities on campus, it is critical to investigate facilities and operations staff members further. Moreover, providing a high quality and safe environment for student-athletes to compete and practice is a fundamental responsibility of athletic departments. Thus, the number of facilities operations staff members in an athletic department is an essential budget item. Because maintaining and renovating facilities, in addition to new facility projects, remain ongoing budget items and necessities for athletic departments, it is vital to understand the burden these campus expansions may place on athletic facilities and operations staff members.

To date, there have been few studies explicitly exploring facilities and operations staff, their perceptions of managing day-to-day operations, or how staffing decisions are made when an organization (e.g., university) expands its facilities. In one example outside of the facilities and operations context, Gallucci and Peterson (2017) observed a decline in athletic trainer staffing levels among Football Bowl Subdivision (FBS) institutions from levels found in previous studies. According to the researchers, this finding could be problematic given evidence in previous studies that "a lack of staffing resulted in increased work–life conflict and increased workloads for [athletic trainers] at the DI level" (p. 792). Additional research has shown that many FBS football programs are inadequately staffed (Aparicio et al., 2015). Outside the sport

management literature, researchers have examined strategies in various fields for determining optimal staffing levels, as discussed further in the next section.

Staffing Optimization Strategies

Research on staffing in service-based industries has largely focused on the challenges of planning because of the general unpredictability of nonstationary demand and customer-related phenomena. In their literature review on staffing and scheduling, Defraeye and Van Nieuwenhuyse (2016) outlined four traditional steps in personnel capacity planning: forecasting demand, determining staffing requirements, shift scheduling, and rostering. For managers, determining the optimal number of staff to assign to a given shift can be a recurring challenge (Boyer & Arnason, 2002; Freeman, 1992). Of course, staffing levels can only be maintained if there is a sufficient number of employees from which to choose in the first place.

Managers seek to minimize costs associated with both delays and staffing (Niyirora & Pender, 2016). If a work shift is overstaffed, personnel costs are unnecessarily high; if a work shift is understaffed, delays in product or service delivery may occur. According to Vile, Gillard, Harper, and Knight (2017), determining an organization's optimal staffing numbers has become even more challenging in contemporary business settings: "With high public expectations and ever increasing competition levels in today's society, service systems are facing escalating pressures to uphold minimum service quality standards in response to time-varying demands from customers requiring assistance with varying levels of urgency" (Vile, Gillard, Harper, & Knight, 2017, p. 767).

Managers may utilize a wide range of strategies to estimate staffing needs, including experienced-based estimates, time and motion (or time study), historical standards, construction estimation, or wild guesses (Levitt, 2013). Fisher, Gallino, and Netessine (2017) proposed a three-step process to optimize staff levels in the retail industry. They argued that historical data on revenue, planned staffing levels, and actual staffing levels could be used to predict staffing needs. Then, these data would be used to adjust staff numbers in some pilot stores. Finally, managers would deploy the strategy across the entire retail chain and evaluate the results. Bechet (2008) recommended using a combination of quantitative and qualitative methods and acknowledging the role contextual differences could play, noting there was not a statistical model or "magic bullet" to make perfect staffing predictions. Finally, he argued that staffing levels should not be determined based on an organization's available financial resources.

Much of the literature on staffing optimization acknowledges the unlikelihood that industry standards exist. Instead, staffing experts recommend using industry benchmarks and taking into account organizational nuances (Goold & Collis, 2005; Reeves, 2002). Regardless of the approach used, there are clear incentives for managers to engage in thoughtful staffing exercises. As discussed in the next section, staffing imbalances have significant consequences for both the organization and its employees.

Organizational and Employee Responses to Staffing Imbalance

A staff that is too large or too small may produce undesirable consequences for the organization. When overstaffed, the organization loses money by paying for redundant or otherwise unnecessary human resources. Additionally, an excessively large staff may leave individual employees feeling underutilized and dissatisfied. On the other hand, understaffing

may put the organization at risk if it leads to security lapses, deferred maintenance, or other problems related to insufficient personnel. More broadly, staffing imbalances may lead to diminished customer service levels and a decrease in sales (Mani, Kesavan, & Swaminathan, 2015; Porto, Henao, López-Ospina, & González, 2019).

At the individual level, low staffing levels have been tied to lower commitment, increased stress, and burnout (Boonstra-Hörwein, Punzengruber, & Gärtner, 2011; Heponiemi et al., 2011). As Hudson and Shen (2018) observed, understaffing has become more common because of economic pressures in the business world. In some cases, declining budgets have also led to an influx of paraprofessional staff (Crockett & Villaneuva, 2018). To avoid these adverse personal and work outcomes, workgroups have begun utilizing coping strategies to address understaffing (Shen, Chang, Cheng, & Kim, 2019).

Due to the scheduling of sporting events, leaders and staff within the sport industry are typically faced with more challenges for scheduling work. Within the sport industry, non-traditional hours by staff members is commonplace due to the scheduling of games. With the frequency of games comes an increased level of demands on staff, thereby threatening each employee's work–life balance. The issues of college athletic employees include long work shifts, travel expectations, and irregular hours (Mazerolle & Eason, 2014). These grueling responsibilities have been studied among athletic trainers, coaches, graduate assistants (Smith, Taylor, & Hardin, 2017), and interns (Cunningham, Sagas, Dixon, Kent, & Turner, 2005; Dixon & Bruening, 2005, 2007).

In college athletics, work–life balance can be improved by creating a culture that promotes flexibility and creativity with trying to meet personal needs, supporting coworkers, and embracing the importance of time away from work (Mazerolle & Eason, 2014). These recommendations can be transferred to all individual subsets of the athletic department, including facilities operations. When discussing how athletic employees stay in these demanding positions, "passion for the role and job, having an acceptance of the athletics lifestyle, having a support network, and having family and work integration" (Mazerolle & Eason, 2014, p.1) were primarily the reasons employees were able to persist and stay in the field. This result indicates employees have found ways to cope with the lack of work–life balance that is associated with a career in college athletics. Furthermore, Mazerolle and Eason found role identity, satisfaction, and work–life balance led to work retention, further indicating the need for senior administrators to promote balance among employees in college athletics.

This work–life balance may be further strained as universities grow in the size, scope, and numbers of facilities they must maintain. Major changes to the way in which an athletic department conducts business (e.g., following the construction of a new stadium or the sponsoring of new sports) may necessitate an updated job analysis, a critical component of human resource management in which management determines whether changes are necessary, including shifting employee responsibilities of other employees, assigning job tasks to groups, or modifying organizational charts (Schwarz, Westerbeek, Liu, Emery, & Turner, 2017). In addition to maintaining work–life balance and reducing strain on employees, such changes may be necessary to prepare for safety and risk management adequately (e.g., Seidler, 2013; Smith, Goss, & Jubenville, 2009).

For athletics administrators charged with balancing facility demand with staffing availability, the challenge is clear. Renovated or new facilities may provide additional sources of revenues, but they also require a significant amount of investment upfront. Because of the revenue-generating potential of these facilities, administrators may be willing to pursue facility

growth without making concurrent adjustments to staffing levels. This strategy may save an athletics department money in the short term, but the stress placed on existing staff members could ultimately lead to withdrawal or turnover behaviors. As many athletic programs at all levels have looked to expand their facility portfolios, it is unclear whether staff increases are part of athletic department growth strategies. Therefore, in this study, we explored perceived staff-to-facility balances among collegiate facilities professionals in the FCS and non-football subdivision of the NCAA Division I membership. As a result of this research, athletic administrators may identify sources of employee satisfaction (or dissatisfaction) and develop staffing optimization strategies where appropriate.

Method

To explore facilities operations professionals' perceptions that their respective departments' staffing needs were being met, we distributed an electronic survey to 218 senior-level employees in the athletic facilities operations departments of Division I FCS and non-football institutions. Before distributing the survey to all athletic facility operation departments, a pilot survey was sent to a purposive sample of NCAA facility managers to evaluate validity and reliability with the survey questions. The pilot study was sent to administrators in four FCS conferences and resulted in a 28% response rate. After reviewing the results of the pilot study, the study was distributed to all Division I FCS institutions' senior-level athletic facilities operations professionals. Email addresses for these participants were obtained from athletic department websites, and we sent an email invitation containing information about the study, an informed consent statement, and a hyperlink to the online survey. Department heads were instructed to complete the survey within three weeks. An email reminder was sent out to improve the response rate one week following initial contact. The study received Institutional Review Board approval.

The survey contained 30 items developed to measure managers' perceptions regarding staff-to-facility balance at their respective institutions. The survey items are listed in the Appendix. Facilities operations department directors were asked both closed- and open-response questions about staffing, budget allocations, the number of facilities managed, and the distance between their main office and their athletic facilities. Descriptive statistics were computed for the closed items.

Content analysis of the qualitative responses was conducted by the second author to identify themes and patterns within the empirical material. The researcher employed open coding to identify key codes emerging from the text (Corbin & Strauss, 2015). Following the recommendations of Saldaña (2016), the coder consulted with the study's coauthors as she progressed through the coding process. Their support was utilized to troubleshoot dilemmas and evaluate the strength of connections made in the empirical material. NVivo 12 was used to categorize the empirical material and to ensure a comprehensive and accurate analysis. To support interpretive validity, we are reporting the interview responses entirely in the form of verbatims (Johnson & Christensen, 2016). The empirical material collected from the participants represent the feedback of facilities and operations employees, as we deemed them to be most familiar with staffing questions, and therefore, the most appropriate to respond. Through the coding process, themes of staffing, budgets, multiple responsibilities, and time demands were identified. The empirical material was coded and subcoded as common themes were found between participant responses. Specifically, events, actions, interactions, and emotions were

compared and assigned a coding label (Brod, Tesler, & Christensen, 2009). The process for coding the empirical material followed a data-driven coding process. This process ensured the coder did not bring predetermined themes into the coding process (Brinkmann, 2013).

Findings and Discussion

A total of 47 completed and usable surveys were returned for a response rate of 22%. The participants represented a wide range of institutions from multiple Divisions I conferences. In sum, 21 conferences were represented (see Table 1). The conference with the highest representation was the Patriot League Conference, who had six managers complete the survey. The Atlantic 10, Big East, and Big South Conferences had the second-highest representation, each with four respondents. The majority of respondents held the title Director (29.2%) or Assistant Athletic Director (22.9%). Institutions represented in the survey averaged 2.8 full-time staff and 6.4 part-time staff. Part-time staff included those completing internships, serving as graduate assistants, and other students.

Table 1.
Descriptive Statistics of Staff and Facilities

Conferences of Respondents		Game Facilities		Practice Facilities		University -owned Facilities	Full-time Staff		Part-time Staff	
	n	*M*	*SD*	*M*	*SD*	%	*M*	*SD*	*M*	*SD*
American East	3	7	1.00	0	0.00	92.8%	2.3	0.94	1.7	0.50
American Athletic	1	5	–	2	–	100%	3	–	3	–
Atlantic 10	4	5.3	0.83	1	1.22	100%	3.3	2.77	2	1.58
Atlantic Sun	1	6	–	1	–	66.7%	1	–	1	–
Big East	4	7.3	1.48	1.8	1.09	82.7%	2.3	1.09	3.3	3.45
Big Sky	2	5	1.00	1	0.00	100%	3.5	2.50	20.5	19.50
Big South	4	5	0.82	1	1.41	100%	3.5	1.50	10.7	13.67
Big West	1	9	–	1	–	100%	2	–	0	–
Colonial Athletic Assoc.	2	4.5	2.50	2	1.00	88.9%	3	2.00	2	1.00
Horizon League	3	4	2.82	1.3	1.25	100%	1.5	0.50	10	8.16
Ivy League	2	10.5	3.50	2	0.00	100%	4	0.00	2.5	2.50
Metro Atlantic Athletic	1	2	–	0	–	50%	1	–	2	–
Missouri Valley	1	6	–	1	–	83.3%	2	–	3	–
Northeast	2	5	0.00	0	0.00	100%	2	0.00	28.5	27.50
Ohio Valley	1	5	–	2	–	100%	2	–	2	–
Patriot League	6	8.5	2.93	2.8	2.41	88.2%	4.4	1.02	7.8	10.40
Southland	2	6.5	1.50	0.5	0.50	100%	1.5	0.50	3	2.00
Southwestern Athletic	1	5	–	2	–	100%	3	–	2	–
Summit League	1	5	–	2	–	100%	3	–	7	–
West Coast	1	5	–	3	–	100%	3	–	1	–
Western Athletic	3	5.3	2.05	2	1.41	100%	2.3	0.47	1	0.82

Staffing Concerns

Although 43.8% of respondents (n = 21) indicated they were at full capacity in terms of staffing, the vast majority of respondents (72.9%; n = 35) reported they did not feel as though their institutions had the appropriate number of full- and part-time staff in place. This result indicates there may be a lack of agreement between athletic department decision makers and facilities operations personnel about what staffing levels are considered adequate.

Commonly identified staff issues from both the open-ended and survey questions included small staff sizes, complications related to the juggling of multiple responsibilities, and a lack of funding for additional personnel. A small staff serving multiple teams and functions often completes extended shifts to ensure all responsibilities are met. An Assistant Director of Facilities and Operations at an institution in the Patriot League reiterated this point, explaining, "We have a small staff historically so in order to best maintain fairness to each team, our staff works long days to ensure coverage. The facilities and operations staff also maintains daily equipment room/laundry operations for all athletic teams." Similarly, an administrator in a Missouri Valley Conference institution noted the challenges with juggling multiple events at the same time: "In the fall when you have a home football game, home women's basketball game, and a home volleyball match all on one day. [A] lack of bodies hurts you on those days." As expected, an understaffed department can lead to serious strain on employees, as expressed by an Ohio Valley Conference director:

> Scheduling two full-time employees to work all major sporting and other events has only one real solution: lots of overtime and sacrifice. Often, we work 14–16 hours on basketball/football game days. Physical and mental fatigue is a constant problem, but we make it work.

The concerns expressed by the department heads above were nearly universal: 50% (n = 24) of respondents reported their staffs were overworked during the busy season, while the remaining 50% said their staffs were overworked year-round. It was reported from a director of facilities and operations that the plan to alleviate some of the burdens on staff was to complete non-critical tasks during the summer when there were fewer events taking place on campus: "We always catch up during the summer when the students are off campus, and there is more time to catch up on the projects that are pushed off."

Respondents indicated hosting multiple events on the same day with limited staff and unreliable student workers led to overworked staff. Furthermore, the respondents indicated small staff sizes, hiring freezes, lack of funds, increased responsibility for the current staff, and scheduling conflicts led to staffing issues throughout the year. With the increasing events for an overworked staff, one athletic facility manager at an Ivy League institution expressed frustration:

> Previous budget cuts and differed maintenance created a hole that we are still working through from both a personnel and resource aspect. Simply maintaining our facilities is more than full-time work but the continual push forward to advance our facilities as well as cleaning up the deferred maintenance puts a strain on our resources.

Collectively, these data and empirical material demonstrate there is a lot of stress on athletic department facility heads to balance the growing demand placed on those working in athletic facilities operations.

Number of Facilities Managed

Results indicated institutions had between one and two practice facilities (M = 1.5, SD = 1.50), though some respondents indicated their institutions had as many as eight practice facilities. Moreover, results showed institutions had about six competition facilities (M = 6.0, SD = 2.56) with a maximum of 14 competition facilities for their athletic programs. The majority of respondents indicated they maintained a steady number of facilities for their athletic programs (79.2%); thus, the majority of Division I FCS and non-football institutions represented in this study are not adding new facilities to their campus. However, despite the lack of reported facility growth in athletics, athletic department facilities operations staff still expressed concerns with balancing the multiple facilities. As one Associate Athletic Director at a West Coast Conference institution mentioned, "We try our best to not schedule events all on the same day, but if that isn't an option we have to prioritize which events require our attention and which can be managed without a full-time staff member."

Of the facilities on campus, the majority were owned by the university (M = 5.7, SD = 2.52) and are run by athletic department staff (58.3%). The majority of these facilities were located less than half a mile from campus. This relatively short distance indicates there is not as much travel for the athletic department facilities operations staff.

Budget Overview

The majority of respondents reported a facilities department operation budget between $100,000 and $499,999 (25.0%). Nine institutions had a budget of over $1,000,000; on the other hand, 11 institutions reported a budget under $50,000. When asked whether their staffing budgets had changed with the addition or removal of facilities in the past, most respondents were either unsure or stated budgets remained unchanged (62.5%). However, most respondents reported they were currently facing budget constraints impacting their ability to complete tasks in their department (41.7%). For instance, one director in the Southland Conference highlighted the struggles associated with finances on campus:

> A lot of [facilities operations issues] has to do with budget constraints from the state. We don't have a historically large donor base that can help offset budget cuts and deficits, so we are not able to hire more staff to help alleviate the hours.

Despite the limited budgets, more than 93% of respondents indicated they generated revenue by renting out their facilities.

Balancing Staff and Facilities

The results indicated most administrators found it difficult to balance the number of staff members in their facilities operations department with the number of facilities (66.7%). Furthermore, when asked to predict how long it would take a department to correct a staff-to-

facility imbalance, more than half (52.1%) of respondents indicated they expected it would take more than one year to strike a balance. This finding suggests facility department senior staff are not optimistic when looking for quick resolutions to staffing problems on campus. Respondents indicated when staffing problems did arise on campus, they remedied the situation by asking the marketing staff to step in to help, utilizing student workers, prioritizing events, using campus physical plant staff, creating new positions, and hiring temporary staff. For example, one administrator in a Northeast Conference institution argued it was necessary to continually "fight for staffing. Hire Graduate assistant and interns if [the] budget cannot handle full-time staff."

Of the respondents that did not describe staffing issues on their campus, they recommended hiring part-time and graduate assistants, completing a report comparing current staffing to peer institutions, ensuring preplanning before events, raising money, and hiring experienced staff. For those participants currently facing an issue on campus, respondents stated they planned to fix this issue by relying on free or cheap labor (e.g., student workers, graduate assistants, interns), using other personnel on campus (e.g., physical facilities staff), creating a staffing model, forming a strategic plan, or catching up during the summer. A recurring theme among department heads currently facing staff-to-facility imbalances was doubt. When asked what plan of action, if any, would be taken to address staffing shortages, administrators responded: "no plan at this time due to budget"; "there is no plan"; "not sure"; "do more with less; make it work"; "no idea"; and "there is none." Two other respondents expressed feelings of "hope" when it came to correcting imbalances ("The hiring freeze will hopefully be gone by September"; "Hopefully, [we can] increase our budget to make some new hires and allocate roles accordingly"). These responses indicate that for many administrators, there is little optimism that staff-to-facility imbalances will be corrected in the foreseeable future.

Over the past five years, significant growth in athletic department facilities at the college level has been reported, "with the building of new stadiums or an upgrade of an existing stadium more often being at the top of the list of expenditures" (Judge et al., 2014, p. 2259). However, the results of this study indicate that facility growth might not be the case in Division I FCS athletic departments. Despite the lack of growth at the Division I FCS level, there is still a reported concern about staffing for the athletic facilities that are on campus. Therefore, this study was conducted to analyze how prevalent the imbalance between staff to facility levels was at among Division I FCS and non-football institutions, and identify what, if any, plans were in place to remedy imbalances. This line of research is particularly relevant as college athletic programs continue to discuss updates to facilities to attract recruits, in addition to having separate facilities on campus for major sports (Judge et al., 2014).

Based on the results of this study, the mean number of full-time facilities operations staff among the FCS and non-football sample is 2.8, while the average number of competition facilities at the participants' university was roughly six. Consequently, the staff-to-facility ratio was more than 1:2 among FCS and non-football institutions. The average budget for each facilities operations department was between $100,000–$499,999. This budget must be spread across all of the university athletic facilities, and as this study found, most facilities are owned by the university. Additionally, either human resources or the athletic administration fully controlled funding to the athletics facility department. This result indicates the facilities operations departments are without full control of their budget, and therefore, are unable to shift allotted money into hiring additional staff without first gaining approval from human resources or senior athletic administrators. Furthermore, current budgets and staffing do not seem to be in a

strong position, as indicated by the majority of respondents stating that their current budget levels inhibit the facilities operations department from completing necessary tasks.

In summary, staffing capacities are not increasing with the addition of new facilities, and many of the facilities operations departments are relying on part-time staff, graduate assistants, interns, and student workers. The reported difficulties with this model are the continuous training that must occur with a high turnover rate and unreliable staff. Facilities operations directors do not feel that they can complete the requirements of their job in the current staffing situation. Furthermore, these directors do not have the confidence that the imbalance will improve as they have limited plans to resolve their problems in the near future.

Implications and Directions for Future Research

Based on these data and empirical material, it appears that despite the perception by administrators that their facilities operations departments are understaffed, there is little expectation from facilities and operations employees that significant changes will be made soon. By increasing facilities yet stagnating the department in charge of maintaining these facilities, the only option facilities operations staff have is to work longer hours to accomplish these additional responsibilities. All of the participants stated they were overworked and understaffed, either during the busy season or throughout the year.

As discussed previously, an understaffed facilities operations team may lead to serious consequences for an organization, including issues related to security, workplace accidents, equipment failure, and employee withdrawal behaviors (i.e., tardiness, absenteeism, turnover). To remedy the perceived imbalance of the staff-to-facility ratio, several recommendations were provided by the facilities and operations staff surveyed. First, athletics personnel should improve communication between coaches and, when possible, schedule games, tournaments, and events in a more practical way that ensures the facilities operations staff has enough time to maintain facilities between events. Second, facility managers should work with human resources or the athletic administration to establish policies that will allow for staffing budgets to adjust according to the number of facilities owned and operated by the university athletic department. Finally, when facility staff is unavailable, use senior athletic department staff members to act as game managers.

Furthermore, before renovating or constructing new facilities, it is important for athletic department decision makers to include a representative from the facilities operations department. It is apparent from this study that facilities operations personnel feel understaffed and have come to expect the impossibility of work-life balance. It is critical that facilities operations directors have a voice during the planning and execution stages of facility development because their staff will be the most directly affected by the addition of new facilities.

While the results of this study leave little question that those within facilities operations departments feel overextended, whether senior athletics administrators are aware of these sentiments is less clear. Based on the previous literature and the findings of this study, future research on the topic of staff-to-facility imbalances is strongly recommended. As colleges and universities continue to pursue state-of-the-art athletic facilities, research in this area should be conducted at a similar rate. Within athletics, directors of facilities operations departments should be trained in effective managerial models so that they are better equipped to handle the imbalance until a more equitable ratio is achieved. Additionally, researchers should consider

examining the involvement of facilities operations departments in facility planning and whether budget administrators accept requests for additional funding, resources, and staff.

It is also worth thinking about the methodology used to determine optimal staffing numbers. In this study, we focused on one metric—staff-to-facility ratio—but other alternatives may be more appropriate. For example, staffing numbers may differ between primary-use (e.g., an arena used for men's and women's basketball) and multiuse facilities (e.g., an arena that hosts men's and women's basketball, ice hockey, and volleyball). In another example, a single facility site may contain multiple specialized spaces such as swimming and diving pools, weight and athletic training rooms, and indoor tracks. In both cases, a staff-to-facility ratio may not adequately account for the nuances of the facilities. In other words, while in this study, we used the staff-to-facility imbalance as a proxy for perceived understaffing, future studies may focus more specifically on proposing an industry standard for optimal staffing levels among facilities operations professionals. As part of this exercise, researchers may consult a wide range of strategies to predict staffing needs (e.g., time and motion, historical standards, industry best practices, staffing surveys of professionals from organizations such as the Collegiate Event and Facility Management Association or International Association of Venue Managers).

In a follow-up study, researchers may also benefit by distinguishing between the various forms of facilities operation staff, including identifying differences between event staff and facilities operations staff as well as between dedicated, full-time professionals and the contingent workforce. In the future, researchers should also consider clarifying differences between facility types, as certain sports facilities like aquatics centers and ice rinks require supplementary technical expertise (Sawyer, 2013). Furthermore, studying this topic from the perspective of athletic directors and other senior administrators could give a more holistic approach to understanding the incidence of staff-to-facility imbalance. Future studies in this area can directly impact and enhance the work-life balance of current facilities operations staff, in addition to improving their quality of work and the maintenance and operation of sporting facilities.

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Appendix

Survey Questions

1. Please list the name of your institution.
2. What is your current title?
3. How many full-time staff does your department have?
4. How many part-time staff (intern, GA, etc.) does your department have?
5. Are you at full staffing capacity?
6. In your opinion, do you have the appropriate amount of staff to accomplish the requirements of your department?
7. In general, do you or your staff feel overworked or understaffed throughout the year?
8. How many practice-only facilities does your school have?
9. How many game facilities does your school have? (Do not double count from practice facilities question)
10. Is your number of facilities steady or is about to change (increase or decrease)?
11. How many of these facilities are owned by your university?
12. Are the facilities managed by the athletic department or the university?
13. Distance to each facility from main office (check all that apply)
14. What is your department budget this year?
15. Is your staffing budget determined by HR or the Athletic Department? If no, please specify.
16. Historically, has your budget adjusted (increased or decreased) with an addition or removal of facilities?
17. In the future, do you have confidence your budget will adjust with the addition or removal of facilities?
18. In your professional opinion, do you experience budget constraints that inhibit you and/or your staff's ability to complete the tasks required in your department?
19. Do you rent out any of your facilities?
20. If *yes*, how many external clients do you host per year (on average)?
21. Has there historically been any difficulty balancing a limited staff with numerous facility locations?
22. Is there currently any difficulty balancing a limited staff with numerous facility locations?
23. If you answered *yes* to either of the previous two questions, please explain what that situation looked like below.
24. How long did the difficulty last?
25. If you are currently dealing with the issue, how long do you expect it to last? (from start to finish)
26. What led to the issue?
27. If a staff to facility ratio was an issue historically, how was the situation remedied?
28. If the situation still exists what is their plan of action for fixing it?
29. If this has never been an issue, are there any recommendations for other universities that may be dealing with this situation?
30. Do you think your department compares to peer institutions in terms of staffing?