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Strength & conditioning (S&C) training in collegiate athletics has become an integral part of optimal athletic preparation. Such training improves physical qualities required to excel in sports and decreases the likelihood of injury. S&C programs have become commonplace within all levels of collegiate athletics. However, there is presently no standardized evaluation of the S&C professional or standardization of who should be performing said evaluation.

The purpose of this study was to examine the expectations of S&C professionals from the perspective of the athletic administrator (AD) providing supervisory oversight, and S&C professionals themselves. Sixteen collegiate athletic professionals (8 athletic administrators, 8 S&C professionals) from an NCAA Division I Mid-Major Conference participated in a semi-structured interview on the current expectations and evaluation process for S&C professionals.

Results revealed that S&C professionals and ADs were consistent in their understandings of the S&C professionals' roles and responsibilities. Despite mutual awareness of roles and responsibilities, S&C professionals believed that the evaluation process could be improved by standardization. Participants also agreed that such an evaluation process would be difficult given a lack of uniform measures of standards. S&C professionals wanted an objective measure of success; they did not believe the measure should be based on wins and losses. Instead, participants suggested the possible use of the number of non-contact injuries or improvement of various performance metrics. The findings of this study indicated that ADs did not feel comfortable giving evaluations specifically about program design, exercise selection, and key performance indicators. Due in part to lack of expertise with the S&C area, as well as a multitude of professional-related responsibilities. ADs in this study did, however, acknowledge the need for standardized and formal forms of evaluation, which suggests that an objective third party may be

best to create these standards. Who should create such measures was unclear. Neither the S&C professionals nor the AD participants offered recommendations as to a third-party evaluator. It was clear from these findings that the current standards as advocated by the NSCA are not useful as guidelines for evaluations. None of the ADs interviewed had heard of, read in any depth, or used NSCA guidelines for evaluation. Moreover, the same was true of S&C professionals. Only one had engaged with the guidelines and believed the guidelines were problematic in their lack of individuality for varying levels of competition.

Future research might identify an appropriate third party to craft such standards, as well as the creation of measures and metrics that could be used by professionals. Such a formal and consistent evaluation process would allow ADs to conduct beneficial evaluations and provide S&C professionals with feedback to aid in their professional development and place emphasis on the health and safety of the collegiate athlete.

EXPECTATIONS OF STRENGTH AND CONDITIONING PROFESSIONALS:
PERSPECTIVES OF ATHLETIC ADMINISTRATORS AND
STRENGTH AND CONDITIONING PROFESSIONALS

by

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CHAPTER I

PROJECT OVERVIEW

The profession of collegiate strength & conditioning (S&C) has undergone considerable public scrutiny since January of 2017. S&C professionals were thrust into the spotlight because of their association with hospitalizations and deaths of college athletes, specifically football players, which have occurred during off-season training (Jenkins, 2018; Solomon & Dodd, 2017). Since the year 2000, there have been 40 fatalities of college athletes as a result of off-season workouts (Jenkins, 2018). There are a number of factors that contribute to each situation including, inadequate emergency treatment (Maese, 2018), lack of appropriate oversight of S&C from the athletic department (Solomon & Dodd, 2017; Alejo, 2018) and the hiring of unqualified S&C professionals (Dodd, 2017; Solomon & Dodd, 2017). Because there is a lack of common best practices in evaluating and hiring/firing of the S&C professional, there is a large gray area that makes attempting to identify the problems difficult.

Strength and conditioning training is an integral part of optimal athletic preparation, which serves to improve physical qualities required to excel in sport and to decrease the likelihood of injury (Haff & Triplett, 2015). In addition to designing and implementing physical development programs for athletes, S&C professionals are routinely required to complete administrative tasks such as developing and implementing a budget, speaking to professional scouts, helping with recruiting of potential student-athletes, participating in a number of game-day duties, handling much of the discipline for the team and provide oversight for nutrition and sports psychology interventions (Alejo, 2017; Watts, 2016).

Identifying a means to accurately assess the effectiveness and competency of a S&C professional has been shown to be a difficult endeavor (Judge et al., 2014; National Strength and Conditioning Association [NSCA], 2009; Watts, 2016). Additionally, there is an absence of well-defined job roles and responsibilities for the S&C professional. In many FBS NCAA Division I programs, the lead S&C professional for sports such as football and basketball is hired and evaluated by the head sport coach and not the athletic administrator (AD) (Massey, Vincent, & Maneval, 2004). This practice has been in place since the beginning of the profession of collegiate S&C (Kontor, 1989). It is up to the individual athletic department to ensure standards are being upheld to promote the safety and well-being of the collegiate student-athlete (Hartshorn, Read, Bishop, & Turner, 2016). Professional standards and guidelines for S&C professionals have been established by the NSCA (NSCA, 2009, 2017), and the National Collegiate Athletic Association (NCAA) now requires S&C certification (NCAA, 2016) to gain and maintain employment. Though the NSCA's standards and guidelines lack explicit job duties and responsibilities required to be a competent and effective collegiate S&C professional, they do outline minimal qualifications required to pass the certification exam (CSCS) and provide a framework for best practices of operating procedures for the S&C professional to follow.

Given the lack of overall standards and guidelines in most S&C jobs, there is a need for further analysis of the expectations from athletic administrators providing oversight of both the S&C professional and the program, as well as a need for exploration of S&C professionals' expectations of what ADs are assessing through the evaluative process. Without such information, finding a way to objectively assess the effectiveness of the S&C professional will likely continue to be vague and limited.

Purpose Statement

The purpose of this study was to examine the expectations and responsibilities of S&C professionals from the perspective of athletic administrators (AD) and to identify S&C professionals' expectations for administrative evaluation of their work. Presently, there are no standards to evaluate the collegiate S&C professional or standards on who does said evaluation. The long-term goal is to improve methods of evaluation for the S&C professional and to provide athletic administrators across the country with information to enhance their current evaluative process of S&C professionals and programs. My specific aims are first, to identify athletic directors' expectations for the work of strength & conditioning professionals; second, to identify strength & conditioning professionals' expectations regarding athletic directors' evaluation of their work; and third to assess current evaluation practices used by ADs in evaluating S&C professionals.

Methods

This case study examined the expectations and responsibilities of S&C professionals from the perspective of both the athletic administrator providing oversight to the S&C program and the S&C professionals. Semi-structured interviews were employed to examine varying expectations of professional responsibilities associated with effective S&C practice. Example interview questions included, "In your opinion what are the primary responsibilities of the S&C professional within your athletic department?" (See Appendix A) and "How often and to what extent do you communicate with the athletic administrator charged with oversight of the strength and conditioning department?" (See Appendix B). This in-depth approach led to a more contextualized explanation of what is presently being assessed.

Participants

Participants were recruited through purposeful and convenience sampling (Marshall & Rossman, 2016). Participants included athletic directors or those in athletic administration with direct oversight of the S&C department ($n=8$) and the lead S&C professionals from member institutions of a NCAA Division I Mid-Major Conference ($n=8$). Initial recruitment began with an inquiry to the S&C professional at each institution to identify the specific administrator providing oversight.

Measures

Upon agreeing to an interview, participants were scheduled to participate in a phone interview. Interview guides are presented in Appendix A (Athletic Director) and B (S&C Professional). Rubin and Rubin (2012) state that with in-depth interviewing, researchers talk to those who have previous knowledge and experience with the topic of interest. Utilizing a semi-structured interview in a one-on-one setting allowed me to develop an interpretation of the perceptions and expectations in question. As a S&C professional with 9 years of collegiate experience specifically in this athletic conference, I have established relationships with a number of the S&C professionals and ADs interviewed. This added a level of familiarity between the participants and myself, allowed for a more open and honest conversation to occur. Prior to conducting interviews with external participants, I conducted pilot interviews with the AD and S&C professional at my institution. Results from these pilot interviews helped focus the interview guide. The interview guides (Appendix A & B) were developed with information taken from the NSCA standards document (NSCA, 2017) and in response to pilot testing.

Data Collection

Participants were emailed an IRB Information Sheet (See Appendix C) which included an overview of the project and details related to protecting the confidentiality of the participant. During this initial recruitment, the athletic administrators were asked to provide any evaluation documents that they use for the department.

Once confirmed, all participants were sent a list of primary interview questions in advance so that they could prepare appropriately. The questions sent to participants were the major questions in the interview guide (See Appendix A & B) without any follow up questions attached. Interviews were audio-recorded using a Yemenren R-9 Voice Recorder. Running notes were kept in case of technological difficulties.

Data Analysis

Marshall and Rossman (2016) suggest seven general phases of qualitative data analysis. The first phase is to organize the data from the interviews. Utilizing the temi.com transcription service, the audio recordings were submitted via the website and the service returned the transcribed interview in a Microsoft Word document. Once transcribed using the temi.com service, I went back, listened to each interview, and fixed the errors that occurred during the automated process in each document to ensure accuracy of the transcription. Audio recordings were deleted after the final check of the transcription.

The second and third phases suggest beginning to analyze the transcriptions and generating categories and themes. Next, using methods of open and axial coding, patterns within the data were identified and analyzed as a whole, with responses from both S&C professionals and ADs. NVivo qualitative data management software (NVivo qualitative data analysis software; QSR International Pty Ltd. Version 11, 2016) was used to analyze interview data. This

software was used to keep track of all coding and subsequent notes in a single uncluttered area. Following initial coding, a codebook was developed (See Appendix D), which included themes, subthemes, definitions of subthemes, and quotations from the dataset. After completion of the codebook, a thematic structure was developed to aid in describing the participants' perspectives.

Strategies to Promote Trustworthiness

As a means to improve trustworthiness and validity of the data collection, methods of peer debriefing were used (Richards & Hemphill, 2017). A colleague, who is an associate professor at a university that is not associated with the current NCAA Division I Mid-Major conference, was selected. This individual has an impartial view of the study and helped to perform an audit of information gathered during the interview process and has a history of publishing qualitative data in the field of psychology. Each interview was discussed at length with this individual to enhance credibility of the study and ensure validity in the coding and analysis. Through these discussions, the peer reviewer helped with clarifying major themes. Once themes were identified and a preliminary codebook was created, the peer reviewer was then provided with this codebook. Following review, the peer reviewer and I went back and created a final codebook that included major themes, subthemes, and definitions of subthemes from the dataset (See Appendix D).

Results

Three major themes emerged from the data of both S&C professionals and ADs: expectations, evaluation and responsibilities. While subthemes were somewhat different within the groups, and may be presented separately, all of the major themes emerged from the data as a whole. Two primary subthemes emerged from the major theme of "Expectations"; the first was "Injury Prevention and Athlete Optimization" and the second dealt solely with "Athlete

Optimization.” Within “Responsibilities,” subthemes emerged from each category, which included “Responsibilities of S&C professionals,” “Responsibilities of Sport Coaches,” and “Responsibilities of ADs.” The final major theme was “Evaluation.” Four primary categories under the “Evaluation” theme emerged. The first included the lack of use of the NSCA’s guidelines, the second subtheme under “Evaluation” was communication. Subthemes that emerged from this category included communication as a significant form of feedback and the amount and depth of formal and informal communication. The next category was the process of evaluation, which included subthemes of yearly evaluations. The fourth theme was recommendations for evaluation, which included the subtheme of needing objective measures/metrics for evaluation as well as the challenges of creating those measures. Of the eight ADs interviewed, only one was able to provide an example of their current evaluation documentation. This evaluation form was not specific to the S&C professional and was used across all sub-unit department heads within the athletic department. Therefore, using these evaluation documents as a method of data triangulation was omitted from the results.

Expectations

Within the theme of expectations, six of the eight S&C professionals said that their philosophy was the prevention of injury and the optimization of athlete success. As SC4 explained,

Our three biggest things that we look to achieve with all of our teams are reduced the likelihood of injury within sport . . . being technically driven, sound prescription of training that is not numbers driven . . . and then the second tier is improving overall athletic performance. We want what we do to develop our athletes to a greater degree and basically enhance their ability to play their sport at a higher level . . . then I think the third entity of what we really look to achieve is just improved overall physical mental resiliency.

This triad was echoed by SC6 who contended, “there are three major things that I tried to take care of while an athlete is under my care,” which includes injury prevention, enhancing athletic performance, and “mental skill development.” SC3 described this philosophy as a “comprehensive approach” that “set[s] that athlete up for success” while “minimizing chances for injury as best we can.” SC5 added, “We are here to keep athletes healthy and on the field of play. Our job is to optimize their ability and genetic potential to be the best athlete they can possibly be.”

Athletic director participants in this study reinforced the philosophies advocated by the S&C participants; four of the eight specifically said that their expectation of S&C was to ensure safety and athlete optimization while two others focused on just optimization. As AD6 noted, expectations of S&C included “Reducing injuries . . . enhancing athletic performance and they need to do it in a safe, positive and productive environment.” AD8 agreed, saying the expectation is to “Develop our student-athletes in a preventative kind of way so they don’t get hurt, but it’s also just to help make them bigger, stronger, faster. That’s pared down to it pretty simple but that’s the way I look at them, just develop them in every kind of way, physically.” AD2 added that such expectations were essential given recent tragic events:

I think everywhere ideally, number one is health and safety and wellbeing of our student-athletes . . . do you have a situation like Maryland? . . . Past health and safety, the number one evaluative piece is in their role is how well the athletes respond to them in the weight room. In other words, are we bigger, are we stronger and faster.

For AD1 and AD4, optimization of the athlete was the most significant expectation. As AD1 said, “What we’re looking for is sport specific development, strength, speed and conditioning so that the student-athletes become better, not just stronger . . .” AD4 simply said, “They manage the entire 21 sports that we have and over 500 athletes in terms of them getting bigger, stronger,

faster . . .” The expectations of both ADs and S&C overall proved similar. Both entities saw the S&C as being responsible for optimizing athletic performance as well as decreasing injuries in collegiate student-athletes. The next theme that emerged is evaluation and its place in how expectations are being met by the S&C professional.

Evaluation

The results of this study indicated that overall, most participants did not partake in a formalized, uniform evaluation process, and they spoke to the challenges of creating such a system to evaluate the work of S&C professionals. They also described the importance of communication between staff and administration, as well as the processes in which they currently engaged. Overwhelmingly, these processes did not include engaging with NSCA standards. None of the eight ADs interviewed used—or had really read—the guidelines. AD3 was emblematic of all the ADs when he said, “I know of its existence and I have not reviewed it.” The responses from the SC participants were similar; only one out of the eight participants had read or even heard of the guidelines, and five out of the eight participants were not sure if those guidelines were used in the evaluation process. The only participants who were aware of the guidelines did not feel as though they were appropriate to be used as part of the evaluation process. SC5 explained,

The problem I have with the guidelines, those guidelines are geared towards a population and written by people for a population that don’t understand how it works . . . I would say the intent is very good and I agree with to some level, but as far as what the NSCA has labeled out and written, I do not agree with and I do not feel that those guidelines work for, for our population.

Communication, however, was consistently cited as a significant and effective form of evaluation both by S&C and AD participants. Yet, it should be noted that the specific type of

communication—particularly whether it was formal or informal—and the frequency of such communication varied greatly between participants. For SC1, communication is once a week and was primarily planned, between 40 minutes “and then it became an hour and there’ll be some days he just talks for an hour and a half, two hours.” SC3 said staff meetings were twice a week and were “more discussion and idea based” in order to “share ideas and kind of create a common thread or common approach to the way we’re going to do things.” For SC4, SC5, and SC6, communication was much more informal and was based on when there was a specific need to communicate. This could be on an hourly basis (as with SC5), a few times a semester (as with SC6), or once a month (as with SC4). Moreover, the communication generally involved both an evaluative function as well as an administrative function.

These forms and regularity of communication were echoed by the AD participants, who generally engaged in both informal and formal communication on a semi-regular basis. As AD2 explained, formal meetings were as-needed, but informal communication occurred regularly:

If there’s issues that need to be addressed and certainly that will drive how often we meet but informal meetings happen all the time, you pop in and so I have a question or hey I need your help with this or I’m having this issue, can you help me how those things will happen all the time? Unplanned and pretty frequently.

Similarly, AD3 noted that while formal meetings were only once or twice a semester, informal communication happens a couple of times a week. For AD4, formal meetings are monthly, but they are also one-on-one and face-to-face; AD6 shared that while formal meetings are monthly, “everybody knows that every administrator here has an open-door policy. So we don’t wait. If there’s something we need to address, we don’t wait until the next meeting.” On the other hand, the AD participants also noted that communication could be augmented. As AD1 noted, “We need to probably improve our communication in light of what happened at the University of

Maryland.” Similarly, AD7 said communication was “Not nearly enough,” adding, “those guys down there tend to be hunkered down in their bunkers out back there . . . I do not communicate with them nearly enough, but I think it’s at least adequate.”

In terms of the current process of evaluation in place, all eight S&C professionals described some sort of evaluation; however, they were typically a general, campus-wide evaluation without specific forms of measure for S&C, per se. As SC1 described, “We had a formal, just a prototypical formal evaluation sheets [with] three questions on it. You jot stuff down. It wasn’t something that was very detailed and . . . it wasn’t something that we really liked.” As SC6 described, the annual evaluation was “for the entire university” and was also self-reported: “So I do an evaluation on myself and a lot of it is goals that I set for myself and then answering the question of whether or not I accomplish those. And then also setting goals for the following school year . . .” Moreover, sports coaches and athletes have little input into those evaluations. Likewise, SC2 noted that there are “campus evaluations where they have an evaluation that goes on their record” in addition to personal evaluations for his staff. For SC4, the evaluation is, to a certain extent, based on the performance of S&C; however, he also sees such evaluations as highly subjective:

I do not have a structured objective evaluation measure. I think a lot of our current evaluation manners are subjective through me, and they’re generally driven by effectiveness of their training as a practitioner and as a professional. How they conduct themselves as a professional, relationships with ranging from a sport coaching staffs all the way to support staff members in athletic administration.

SC5 did note that evaluations are given to the students but also said such evaluations are “not very formal.”

For the ADs, on the other hand, there was more variation in the types of evaluation that were given. Some tended towards the more formal, while others employed an informal, more frequent approach. AD6 and AD8 specifically spoke to the use of informal, constant feedback instead of formal evaluations. As AD6 said, in addition to year-end surveys by athletes:

Here it's perpetual it's not just once a month or once a year or once half a year or once quarterly. I have regular conversations and seek regular feedback from all of the programs and support staff that I touch. College athletics is such a perpetual endeavor that if you, if you wait weeks and months before you take the temperature of what's going on, you can find yourself well behind . . .

AD8 had a similar response, saying:

First of all, I've been doing this 30 years and not once have I ever been evaluated, have I ever had somebody evaluate me for 30 years, which is kind of weird. We're somewhat of a product of our environment. I do have a year-end meeting and go over things with people coaches and staff, but I'm a guy that I like to evaluate every day. If I'm in there and I come in there, I don't believe in just not saying things and let things build up and at the end of the year you just go ahead talk to them and say, "Well I saw back in September and you've been doing it ever since." Well I'd rather deal with it in September.

AD4 also noted his program did not conduct much of a formal evaluation, saying "I do not sit down with a paper at the end of the year and talk about meeting expectations or exceeding expectations or not following expectations." As he noted, "there's not a paper formality trail."

Other ADs mentioned differing levels of evaluation. For AD1, it's written and face-to-face feedback, while AD5 only has formal measures of success in the areas of administration and communication. While AD5 also noted there are student-athlete evaluations, "I can't tell you how much weight I give to my students in their evaluations of situations. I don't know that our students truly are qualified to evaluate my strength staff." AD2 gives evaluations twice a year in order to set "professional expectations . . . how we treat other people, how we treat each other the

way we interact with our student-athletes, what's appropriate, what's not, and then what we expect out of position . . .” For AD3 and AD7, the evaluation is more formal, although it is not necessarily with S&C-specific measures. As AD3 noted, there is “a 360 evaluation and that they will conduct their own evaluation. Student-athletes evaluate, coaches evaluate, and I'll get all that and share it with them.” And for AD7:

The process evaluation for them, in its basic structure is no different than the evaluation for anyone else. We have an institutional structure that we use, where you have certain goals and guidelines that they're looking to meet. We customize those goals, individual goals between the different people in different programs, but the basic structure is all the same.

Finally, both S&C and AD participants offered their recommendations—and observations about challenges—as to how the evaluation process should be changed. All eight of the S&C professionals felt that, while specific criteria for evaluations would be helpful, defining those criteria was very difficult. As SC2 said,

I don't know what a true evaluation piece would look like. Is it work ethic? Is it attitude? Is it being on time? Is it coaches? If they're happy, is it student-athletes being happy? I think there's so many pieces to try to put it in there. You know, what's a proper evaluation?

While participants wanted measures and standards, they were unclear what those would be. As SC1 noted evaluations should be based on “Making sure that we are making these athletes better and we're showing you the data that says, Hey, just because our team is not winning . . . don't necessarily blame strength and conditioning because X, Y, and Z, it's all improving, and that's what we talked about.”

The student component was mentioned by six of the eight participants, which included getting more feedback from the student-athletes. As SC4 said, “I definitely think job proficiency

is multifactorial. I think as a strength and conditioning professional, I think we contribute to the development of our student-athletes' physical development." Similarly, S6 suggested looking at metrics like,

Evaluate whether or not things like non-contact injuries have decreased or you can look at tangible numbers in strength or force or a vertical jump height or something like that. And it's metrics, performance metrics, whether or not the person has been also developing them as human beings and not just athletes.

Athletic directors, on the other hand, focused on the need for guidelines for evaluations, rather than what those guidelines would be. As AD1 said, "I think if you could develop a tool that rates performance, which I don't have a way of doing that so much . . ." In part, the difficulty of developing those guidelines is similar to what the S&C professionals said—the complexity and lack of standardized metrics. As AD7 said, they "really have an almost impossible job because they're trying to be everything to everybody all the time. And because of that, having an evaluation and setting goals, it's pretty complex sometimes . . ." However, two other ADs also mentioned that creating such guidelines is difficult because of their lack of specific knowledge about S&C. As AD3 said, "I wish I knew more about the strength and conditioning as a supervisor for that area. It feels very awkward to supervise an area that I know so very little about." Similarly, AD5 said, "An administrator can't sit in their office and fill something out about a strength conditioning professional without having a great deal of time in the area and watching them actually do what it is they do, and that's difficult for an AD to do because they're an AD and whether they get pulled in 42 different directions." The evaluation process is varied across all institutions. ADs and S&C participants agreed that a standard evaluation process would be difficult given a lack of uniform measures of standards. The next theme that emerged was responsibilities of the AD and S&C professional.

Responsibilities

The responsibilities of the athletic directors varied slightly between institutions, but all participants noted a division of labor in both responsibilities and accountability through a professional hierarchy. For instance, AD2 noted he “oversee[s] compliance, academics, student-athlete development, athletic training and strength and conditioning for right now,” while reporting to the Athletic Director. AD4 described the way in which responsibilities were distributed, noting that there are both internal and external athletic directors with different jobs: “An associate athletic director that works largely with the coaches as the liaison between the coaches . . . an associate athletic director for fundraising and for communications . . . assistant athletic directors who oversee certain areas of business management.” AD3 is responsible for everything that’s associated with the student-athlete, including “the training room and strength and conditioning,” as well as being the sports administrator for track, reporting to the Athletic Director. As an Associate AD, AD5 also reported to the AD and manages “strength and conditioning and athletic training,” in addition to serving as “the director of operations for men’s basketball program.” AD6, however, was in charge of four different sports, and oversees “the department’s capital projects” without any specific fundraising duties.

Results from S&C professionals indicated a different set of responsibilities that were uniform in one major way—none of the participants were required to teach or perform research. Only one of the participants was required to attend sports practices, although all were either encouraged to do so or voluntarily did so on an informal basis. Depending on the participants, specific responsibilities varied. For instance, SC1 not only supervises strength and conditioning but has also “been the lead on building a fueling station, getting some protein or recovery bars, getting some milk and getting that all started.” SC2 managed specific sports, as well as being

“directly responsible or in charge of preparing nutrition talks for teams and for individuals.”

Moreover, SC2 was an internship coordinator and when possible, traveled with various sports teams and coordinated various appointments for athletes, balancing a wide range of responsibilities within his position. As SC3 described it, his responsibilities comprised of “managing and monitoring all that goes on and, in this room (S&C facility) and making sure that through our entire athletic department that everybody's being taken care of from football to basketball to golf and cross country.” SC4 concurred, noting that there are often “multiple hats that we tend to take on” including the physical and mental aspects of “developing our athletes and their performance” and being in constant “communication with sport coaches and administrators.” SC5 similarly described the multi-faceted and frequently diverse responsibilities of his position in addition to strength and conditioning:

I also facilitate our nutrition center refueling station. I'm also the exercise science liaison between athletics and exercise science. The other thing is I do a little bit of fundraising and promotion stuff for athletics as well as working with our chancellor. The other thing would be, is, helping with event management, different stuff around the university as far as making sure things are taken care of.

SC5 included a handful of other responsibilities, including community outreach, scheduling of appointments for athletes, facilitating recovery sessions, and overseeing strongman competitions. This was echoed by SC6, who is the only full-time employee and works with about 230 athletes: “And a typical day, I probably see anywhere from 100 to 150 depending on the day,” in addition to collaborating with coaches in basketball, soccer, and volleyball. While the specifics of these participants’ responsibilities varied, each described the need to be versatile and flexible, taking on duties when there was a need.

Finally, S&C professionals described their relationship with, or the positions of, the sports coaches. Overall, participants noted that the level of involvement—and the type of that involvement—depended on the sport and on the coach. However, these participants, by and large, also felt that there was either a collaboration with the coaches and the S&C professionals or a conversation with them. SC1 described it as a give-and-take, when coaches “talk about, hey, we need more strength or hey, we want to see more conditioning. So they’ll give us those physiological wants and then we’ll go and build a program test and retest and kind of develop it.” SC4 noted the relationship with coaches is “a collaborative effort . . . because I view ourselves as definitely a part of the staff for each individual sport and we need to seek out through discussions with the coaching staff and the head coach, what are the standards and that type of atmosphere and culture they want with their team.” Such a collaboration involves an “open line of communication with our sport coaching staff, which has allowed our staff to basically have more freedom to work our area of expertise.” Similarly, SC2 said, “there’s a lot of discussion with them because they have everything broken off by how they would do it because ultimately that is their sport.” It appears to be clear that the role and responsibilities of the S&C professional varied by institution and subsequent financial and human resources.

Three major themes emerged from the analysis of both S&C professionals and ADs: (1) expectations of the role of the S&C professional; (2) evaluation of the S&C professional; and (3) responsibilities of the S&C professional. Although these themes emerged separately, there are a few common threads among them. There was a consensus that uniform guidelines are needed to ensure student-athlete safety is being emphasized. Both constituents agreed that forming standards would be difficult given the various job responsibilities of the S&C professional. It was suggested that an independent third party be utilized to perform evaluations and set standards.

Another option that was suggested was to employ an athletic administrator with content expertise to form these evaluations and create standards of care. These suggestions helped in identifying who should perform evaluations of the S&C professional, but specifics on what should be evaluated still need to be examined.

Discussion

Despite the contention of Massey et al. (2004) that there is a lack of well-defined job roles and responsibilities for the S&C professional, the results of this study found that both S&C professionals and ADs were consistent in their understandings of the S&C's roles and responsibilities. While the itemization of each of these was different by participant, and therefore institution, no S&C professional had to teach or conduct research, and all were clear in their roles and the expectations of those roles. Such responsibilities of the participants in this study did align with the existing literature, including forming positive relationships with athletes and coaches, performance-related training, mental development of athletes, and other professional responsibilities (Hornsby et al., 2017).

Regardless of awareness of roles and responsibilities, S&C professionals believed that the evaluation process could be improved by standardization development. These results are supported by the existing literature, which has noted that there is a lack of common practice amongst athletic administrators in the evaluation of S&C professionals (Gillham et al., 2017; Hornsby et al., 2017), as well as the difficulty in identifying a means to accurately assess the effectiveness and competency of a S&C professional (Judge et al., 2014; NSCA, 2009; Watts, 2016). Watts's (2016) contention is that many of the problems in the S&C profession directly to lackluster, muddled, and largely missing evaluation protocols. While participants of this study did not note a lack of evaluation, they did, as a whole, point to a lack of uniform standards. While

each AD was asked to provide their current evaluation form, only one of the eight ADs was able to produce this document. The lone evaluation provided was a generic form used to evaluate all members of the athletic department who lead a sub-unit.

Watts (2016) attributes this challenge of providing quality evaluation of the S&C professional to the profession itself, arguing that it is process-based but it lies in an outcome-based system of collegiate sports where wins and losses are often the qualifying factors for success (Watts, 2016). Again, the participants of this study confirmed this assertion. While S&C professionals wanted an objective measure of success, they did not believe that such an outcome could or should be based on wins and losses. Instead, participants suggested possibly the use of number of non-contact injuries or improvement of various performance metrics.

While Alejo (2017) argued that comprehensive performance reviews should be completed on the S&C professional by the AD and should include evaluation of the work of the S&C professional in agreed upon areas, the findings of this study indicated that ADs did not necessarily feel comfortable giving evaluations specifically about program design, exercise selection, and key performance indicators. In part, this lack of comfort was due to an absence of expertise with the S&C area, as well as a multitude of professional-related responsibilities. ADs in this study did, however, acknowledge the need for standardized and formalized forms of evaluation, particularly given the tragic events that occurred most recently with the Maryland football program.

This indicates that an objective third party may be best to create these standards. SC2 specifically said there should be “a one-time thing where I have a third party come in. Somebody that’s prominent in the field, they come in and they watch a week or they watch a month or whatever it might be, and they come in and they give you an honest evaluation.” Who should

create such measures was unclear. Neither the S&C professionals nor the AD participants offered recommendations as to a third-party evaluator. However, what was clear from these findings was that the current standards as advocated by NSCA are not useful as guidelines for evaluations. None of the ADs interviewed had either heard of, read in any depth, or used NSCA guidelines for evaluation. Moreover, the same was true of S&C professionals; only one who had engaged with them believed the guidelines were problematic in their lack of individuality for varying levels of competition.

Conclusion

Given the importance of S&C for optimal athletic performance, as well as the more recent headlines made by athletes who have been injured, hospitalized, or died in a collegiate sports-related incident, there is an urgent need to create uniform guidelines by which to evaluate S&C professionals. Such guidelines are essential to ensure the safety of the athletes being served by the athletics department by making individuals accountable for their decisions. Moreover, such standardization may be useful in establishing a culture that prioritizes athlete safety. The results of this study indicate that current guidelines, provided by the NSCA are not being utilized by either S&C professionals or ADs. Participants desire some form of uniform measures and standards; however, they also articulated the challenges that emerge from such standards given the complex and multi-faceted nature of the job and the outcomes that emerge from that job. Future research might identify an appropriate third-party to help craft such standards, as well as the creation of measures and metrics that could be used by programs and professionals. Such a formal and consistent evaluation process would allow ADs without expertise to conduct beneficial evaluations and provide S&C professionals feedback to aid in their professional development and to place an emphasis on the health and safety of the collegiate athlete.

CHAPTER II

DISSEMINATION

The dissemination plan for this project is to provide a comprehensive report to athletic administrators of the NCAA Division I Mid-Major Conference used in this study. This report will be emailed to all participants and will provide an overview and summarize the findings described in Chapter I. Given the time constraints associated with the job requirements of athletic administrators, the report has been concisely written and key findings have been emphasized to increase the likelihood of reader participation.

The report to ADs is presented in the following paragraphs and the accompanying 1-page infographic.

Athletic Directors' Expectations of Strength & Conditioning Professionals

Strength & conditioning (S&C) training in collegiate athletics has become an integral part of optimal athletic preparation. Such training improves physical qualities required to excel in sports and decreases the likelihood of injury. S&C programs have become commonplace within all levels of collegiate athletics. However, there is presently no standard evaluation of the S&C professional. Identifying a means to accurately assess the effectiveness and competency of the S&C professional has been shown to be a difficult endeavor (Judge et al., 2014; NSCA, 2009; Watts, 2016). Many athletic administrators are charged with evaluating and ensuring that the operational sub-units of the athletic department meet certain standards. Professional standards and guidelines for S&C professionals have been established by the National Strength and

Conditioning Association (NSCA, 2009, 2017), and the NCAA now requires S&C certification to gain and maintain employment. Though the NSCA's standards and guidelines lack explicit job duties and responsibilities required to be a competent and effective collegiate S&C professional, they do outline minimal qualifications required to pass the certification exam (CSCS) and provide a framework for best practices of operating procedures for the S&C professional to follow. The purpose of this study was to identify expectations and responsibilities of S&C professionals from the perspectives of athletic administrators and identify S&C professionals' expectations for administrative evaluation of their work.

A semi-structured interview was used to examine the expectations and responsibilities of S&C professionals from the perspective of both the athletic administrator charged with providing oversight to the S&C program ($n=8$) and the S&C professionals ($n=8$) from a NCAA Division I Mid-Major Athletic Conference.

Key Findings

- Both ADs and S&C understood their primary job responsibilities
 - S&C responsibilities varied by institution
- S&C professionals believed standardization could improve the evaluation process
- Both ADs and S&C agree that establishing a standard evaluation will continue to be difficult
- S&C want an objective measure of competency, but agree that wins and losses should not be that measure
 - A combination of injury statistics along with performance metrics may be a better approach

- ADs in this study did not feel comfortable giving specific S&C feedback because of their lack of content expertise in these areas
- ADs also noted the multitude of professional-related responsibilities make it difficult to create a standard
- ADs noted current standards from the NSCA were not useful guidelines for evaluation
- An independent third party may be best to create standards to be used in future evaluations

Results revealed that S&C professionals and ADs were consistent in their understandings of the S&C professionals' roles and responsibilities. Despite mutual awareness of roles and responsibilities, S&C professionals believed that the evaluation process could be improved by standardization. Participants also agreed that such an evaluation process would be difficult given a lack of uniform measures of standards. S&C professionals wanted an objective measure of success; they did not believe the measure should be based on wins and losses. Instead, participants suggested the possible use of number of non-contact injuries or improvement of various performance metrics. The findings of this study indicated that ADs did not feel comfortable giving evaluations specifically about program design, exercise selection, and key performance indicators. Due in part to lack of expertise with the S&C area, as well as a multitude of professional-related responsibilities. ADs in this study did, however, acknowledge the need for standard and formal forms of evaluation, which suggests that an objective third party may be best to create these standards. Who should create such measures was unclear. Neither the S&C professionals nor the AD participants offered recommendations as to a third-party evaluator. It was clear from these findings that the current standards as advocated by the NSCA are not useful

as guidelines for evaluations. None of the ADs interviewed had heard of, read in any depth, or used NSCA guidelines for evaluation. The same was true of S&C professionals. Only one had engaged with the guidelines and believed the guidelines were problematic in their lack of individuality for varying levels of competition.

Recommendations

Given the importance of S&C for optimal athletic performance, as well as the more recent headlines made by athletes who have been injured, hospitalized, or died in a collegiate sports-related incident, there is an urgent need to create uniform guidelines by which to evaluate S&C professionals. ADs could promote the health and well-being of student-athletes by hiring athletic administrators (Associate/Senior Associate AD) with content expertise in S&C. This additional member of the senior leadership team within the athletic department can serve to provide evaluations of the S&C professionals work and provide administrative oversight to ensure best practices are being met. Additionally, ADs with oversight of S&C programs will benefit from the inclusion of an objective third party to help create standards for evaluation of the S&C professional. A possible next step would be to identify a cohort of S&C professionals who have years of experience in leading a S&C department at the collegiate level. Providing athletic administrators with a list of qualified consultants will take out the guesswork on who to bring in to help the department. Information gleaned from a third party can ultimately aid ADs without expertise to administer beneficial evaluations and provide S&C professionals with feedback to aid in their professional development and place emphasis on the health and safety of the collegiate student-athlete.

Figure 1. Infographic for Athletic Directors



CHAPTER III

ACTION PLAN

Demonstrating a need for further understanding of the evaluation process of S&C professionals is an integral piece in positively affecting the entire S&C profession. Providing recommendations and educating current athletic administrators and S&C professionals on the perceived roles and expectations of effective practice from the viewpoint of those charged with providing oversight is an important immediate step. The following action plan will help with this objective.

As noted in Chapter II, a report has been produced to distribute to athletic administrators and S&C professionals in a NCAA Division I Mid-Major Conference. The goal of this report is to provide an overview and summarize findings from the present study as described in Chapter I. This report will bring awareness to the lack of structured evaluative processes for the assessment of the S&C professional and show the imperative need for such a tool. Often those charged with supervisory oversight of the S&C professional and department do not have a full understanding of what S&C coaches actually do in practice. Closing this knowledge gap of the athletic administrator with education and providing next steps to standardization of evaluation practices will promote the field of strength and conditioning from the top down.

The next step in dissemination of the current study will be to present findings to administrators, healthcare professionals, and S&C professionals at the annual NCAA Division I Mid-Major Conference Health Summit. This summit will take place in May 2020. As a member of the planning committee, I have been able to discuss results with other members of the

committee and ensure a spot as a speaker at this event. The goal of this presentation is to share the findings with professionals who have a direct impact on the health and wellbeing of student-athletes. The attendees of this summit include athletic administrators, team physicians, S&C professionals, athletic trainers, nutritionists, physical therapists, and mental health professionals. Providing this cohort with information on the lack of standardized evaluation practices within the S&C profession will focus much needed attention to the problem. Additionally, the athletic administrators who attend this event are those who provide oversight to the performance and medical arms of the athletic department, many of whom participated in the current study.

The next step of the action plan is to gather feedback from stakeholders who interacted with either the report or the presentation. This feedback will promote conversation between stakeholders from a number of different areas within the collegiate athletic landscape and myself. Highlights of these conversations will be journaled for future reference. These conversations will continue the push for enhancing the evaluation processes of the S&C professional and provide clarity in determining the most appropriate course of action to get a standardized evaluation in place for the future. An area of suggested future research from Chapter I indicated finding an appropriate third-party provider to establish and execute these evaluations. Discussions will be based on this notion and establish a better understanding of who this third-party provider should be.

Finally, all the aforementioned information and data will be used to produce a manuscript for professional publication. The National Association of Collegiate Directors of Athletics (NACDA) produces a quarterly journal, *Athletics Administration*. This journal has widespread distribution among athletic administrators and other athletic department members including operations, development, academic success, and compliance. Another option for publication is in

the bimonthly magazine, *Coach and Athletic Director*. This periodical has a widespread audience of not only college coaches and administrators but also reaches high school coaches and administrators. In addition to its printed issues, *Coach and Athletic Director* reaches coaches through its website and its bi-weekly e-newsletter.

The ultimate outcome will be to provide information to collegiate athletic administrators and enhance oversight of S&C professionals. Another option for publication will be in the NSCA's Strength and Conditioning Journal, a monthly "non-research" publication that is circulated to all of the NSCA's membership. An article in this journal would provide the S&C community a with a better understanding of athletic directors expectations of their work.

The long-term goal of this project is to improve methods of evaluation for the S&C professional, and provide athletic administrators across the country with information to enhance their current evaluative process of S&C professionals and programs. Providing athletic administrators guidelines for effective evaluation of competent S&C professionals will improve the worth of the S&C professional and all collegiate athletic programs. Further research is needed to provide specific recommendations on an objective and standard evaluation protocol. This study offers a first step toward providing S&C professionals with the evaluation that is required to continue to enhance the profession.

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APPENDIX A

ATHLETIC ADMINISTRATOR INTERVIEW GUIDE

Hello,

I'm Andrew Carter and I am an assistant AD at Campbell University and completing my doctorate in kinesiology at the University of North Carolina at Greensboro. It's nice to [meet you/see you again]. Thank you for taking the time to talk with me this [morning/afternoon]. Before we get started, I want to take a chance to review the purpose of this interview: we are interested in learning more about the strength and conditioning program and staff at your university.

What we want to know is about the expectations and the process of evaluation that your department has for the strength and conditioning coaches and program. Currently, there is no standard evaluation present in the field. The information we gather will be used for research associated with my doctoral dissertation and possible research publication; ultimately, I want to use the information provided by you and the other athletic administrators to develop a method of evaluation that can be standardized for all S&C professionals. Anything that you say will be kept strictly confidential. That is, we will transcribe this interview and then remove your name and replace it with a code number. All other identifying information, such as the university you are associated with, will be removed. Therefore, please feel free to respond candidly and honestly. The interview should not take any longer than 30 minutes.

I also want you to know that your participation in this interview is entirely optional. You don't have to participate and there will be no penalty for not participating. If you decide to start the interview and at some part during the conversation you do not want to proceed, it is okay to stop at any time.

During the interview I will be taking notes, these notes will help me stay on track with the interview. I am also recording this conversation. The recording will be deleted after transcription of the conversation. Additionally, if you say something during the interview and decide later that you do not want to use it, I can omit that portion. Additionally, upon conclusion of interview transcription, I will provide a copy to you.

Does everything sound alright? [wait for response] Is it ok to begin? [wait for response] Do you have any questions about the interview or any of the other information I have given you before we begin? [wait for response] Ok, let's begin.

Background Information: Before we get into any specifics with regards to the strength and conditioning program I'd like to know a little more about the athletic department and your specific role.

1. Would you please describe the structure (reporting lines) of the athletic department?
 - a. Who reports to whom?

2. (Associate AD's) In addition to providing oversight to the strength and conditioning department, what other formal administrative roles do you have?
 - a. (AD's) What other departments and sport programs do you provide oversight?

Specific Information Regarding Expectations of Strength and Conditioning

3. In your opinion what are the primary responsibilities of the S&C professional within your athletic department?
4. Is there a formal process of evaluation for the strength and conditioning staff and department?
 - a. Would you mind sharing that information? *(If they haven't done so during the initial recruitment)*
 - b. Can you describe the expectations set forth by yourself on the strength and conditioning professionals in your department?
 - c. Is there a process in place to ensure expectations are being met?
5. Aside from yourself, who provides information on the evaluation of the strength and conditioning staff?
 - i. Sport Coach?
 - ii. Athletic Trainers?
 - iii. Assistant S&C Coaches?
 - b. How often do you seek this information?
6. The NSCA has an updated document named Strength and Conditioning Professionals Standards and Guidelines. Have you had the opportunity to review this document?
 - a. Is this document taken into consideration when conducting a formal evaluation? *(If yes, continue to the questions below. If NO provide context on the below questions)*
 - i. Do the members of the S&C department meet minimum qualifications required to be a CSCS?
 1. Is it important to you for the S&C professional to be an expert in these areas? *(Only necessary if key components haven't been mentioned yet)*
 - a. Exercise Sciences
 - b. Nutrition
 - c. Exercise Technique
 - d. Program Design

- e. Organization and Administration
- f. Testing and Evaluation
 - ii. Do you know if S&C activities are planned in advance?
 - 1. Is there anyone, other than the S&C, looking at the plan?
 - iii. Does the S&C professional maintain facilities appropriate for activity?
 - iv. Are there precautions to prevent skin borne issues taken by the S&C staff?
 - v. Does the S&C department have an established Emergency Action Plan?
 - vi. Do the S&C professionals maintain appropriate records?
 - 1. Such as training logs, equipment User manuals, safety policies, injury/accident reports

AD and S&C professional Interaction

- 7. How often do you communicate with the lead strength and conditioning professional or other members of the S&C staff? (informal)
 - a. How often are there formal interactions? (all-staff meetings, performance group meetings, senior staff meetings)
- 8. Who is ultimately responsible for the hiring of a new lead S&C professional?
 - a. What other entities provide input?
 - b. Who is responsible for the hiring of assistant or associate directors of S&C?
 - i. Is there administrative input for hiring assistant or associate directors of S&C?
- 9. (*If not already addressed*) What do you look for when hiring a new strength and conditioning professional?

Closing Questions- As we get ready to conclude the interview, I have a couple of final questions related to your experiences:

- 10. In your opinion, is the current process within your department for evaluation of the S&C professional adequate?
 - a. How would you change the evaluation process for the S&C professionals in your department?
- 11. Is there anything that you would like to add from your perspective on the expectations and evaluation of the strength and conditioning professional?
- 12. What other questions would have been of value to enhance this interview?

APPENDIX B

STRENGTH AND CONDITIONING PROFESSIONAL INTERVIEW GUIDE

Hello,

I'm Andrew Carter and I am an assistant AD at Campbell University and completing my doctorate in kinesiology at the University of North Carolina at Greensboro. It's nice to [meet you/see you again]. Thank you for taking the time to talk with me this [morning/afternoon]. Before we get started, I want to take a chance to review the purpose of this interview: we are interested in learning more about the strength and conditioning program and staff at your university.

What we want to know is about the expectations and the process of evaluation that is in place for you and the [strength and conditioning/sports performance] department. Currently, there is no standard evaluation present in the field. The information we gather will be used for research associated with my doctoral dissertation and possible research publication, ultimately I want to use the information provided by you and the other athletic administrators to develop a method of evaluation that can be standardized for all S&C professionals. Anything that you say will be kept strictly confidential. That is, we will transcribe this interview and then remove your name and replace it with a code number. All other identifying information, such as the university you are associated with, will be removed. Therefore, please feel free to respond candidly and honestly. The interview should not take any longer than 30 minutes.

I also want you to know that your participation in this interview is entirely optional. You don't have to participate and there will be no penalty for not participating. If you decide to start the interview and at some part during the conversation you do not want to proceed, it is okay to stop at any time.

During the interview I will be taking notes, these notes will help me stay on track with the interview. I am also recording this conversation. The recording will be deleted after transcription of the conversation. Additionally, if you say something during the interview and decide later that you do not want to use it, I can omit that portion. Additionally, upon conclusion of interview transcription, I will provide a copy to you.

Does everything sound alright? [wait for response] Is it ok to begin? [wait for response] Do you have any questions about the interview or any of the other information I have given you before we begin? [wait for response] Ok, let's begin.

Background Information: Before we get into any specifics with regards to the strength and conditioning program I'd like to know a little more about the athletic department and your specific role.

1. How long have you been the [director/head/assistant AD for strength and conditioning] at [institutions name]?

- a. How long have you been in the field of strength and conditioning overall?
 - b. What other roles have you had?
2. Would you please describe the structure (reporting lines) of the athletic department?
 - a. Who reports to whom?
3. In addition to strength and conditioning, do you have any additional duties that are required of you within the athletic department?
4. What responsibilities do you have on a day-to-day basis?
 - a. Are you expected to attend sport practices? If so, what is expected of you during that time?
 - b. Are you required to teach or conduct research?
 - c. Do you have to facilitate outside services such as nutrition education, sport psychology, outside recovery facilitation (massage, yoga, etc.)?

Specific Information regarding the strength and conditioning program: Now that we have a little background information, I'd like to get into some more specifics about the strength and conditioning program.

5. Would you describe the strength and conditioning program?
 - a. What is your programs philosophy?
 - b. How many strength and conditioning professionals are on staff?
 - c. Does your entire staff follow the same training philosophies?
6. What input is gathered from sport coaches?
 - a. Do sport coaches ever tell you what to do in the S&C space?
 - b. How do you deal with that?
 - c. How do you instruct your assistants to accommodate sport coaches?

Athletic administrator communication and expectations: We can talk about philosophy and methodologies for the entire day, but now I'd like to find out a little more about how you're evaluated and the expectations set by the athletic department.

7. How often and to what extent do you communicate with the athletic administrator charged with oversight of the strength and conditioning department?
8. Is there a process of evaluation for you and the department completed by administration?
 - a. Would you mind sharing that information?
 - b. Are coaches involved in your evaluation process?

- c. Are there any other entities involved in the evaluation process?
- 9. Do you have an evaluation system in place for your assistants and GA's?
 - a. If so, would you mind sharing that information?
 - b. Do you seek out evaluations [if nothing exists from administration]?
 - i. From whom? (Sports medicine, sport coaches, other S&C professionals)
- 10. Do you know if the NSCA's Standards and Guidelines are taken into consideration when you are being evaluated?
- 11. Can you describe expectations of you and the department set forth by administration?
- 12. Do you feel as if you are supported by the AD and the department?
 - a. Is there anything that could increase your sense of value within the department?
- 13. Would you evaluate yourself and your staff differently?

Closing Questions- As we get ready to conclude the interview, I have a couple of final questions related to your experiences:

- 14. Is there anything that you would like to add from your perspective on the expectations and evaluation of the strength and conditioning professional?
- 15. What other questions would have been of value to enhance this interview?
- 16. Would you mind if I contacted you in the future if I have any follow up questions?

APPENDIX C

IRB INFORMATION SHEET

Project Title: Athletic Director's Expectations of Strength & Conditioning Professionals

Principal Investigator: Andrew Carter

Faculty Advisor: Dr. Pam Kocher Brown

What is this all about?

I am asking you to participate in this research study because we plan to identify expectations and responsibilities of S&C professionals from the perspectives of athletic administrators and identify S&C professionals' expectations for administrative evaluation of their work. This research project will only take about thirty (30) minutes and will involve you participating in an in-person or video interview that will be recorded. Your participation in this research project is voluntary.

How will this negatively affect me?

No, other than the time you spend on this project there are no know or foreseeable risks involved with this study.

What do I get out of this research project?

You and/or your society will or might gain a better understanding of the expectations of strength and conditioning professionals from a cohort of peer athletic administrators and other strength and conditioning professionals.

Will I get paid for participating?

You will not be paid for your participation in this research.

What about my confidentiality?

We will do everything possible to make sure that your information is kept confidential. All information obtained in this study is strictly confidential unless disclosure is required by law. Because your voice will be potentially identifiable by anyone who hears the recording, your confidentiality for things you say on the recording cannot be guaranteed although the researcher will try to limit access to the recording. We will transcribe the interview, delete the audio and then remove your name and replace it with a code number. All other identifying information, such as the university you are associated with, will be removed. Transcriptions and any other electronic data associated with the project will be saved at a High Risk level of classification to the UNCG Box (uncg.edu/box). Data will also be stored on the primary investigator's computer which is password protected in his office at Campbell University.

What if I do not want to be in this research study?

You do not have to be part of this project. This project is voluntary and it is up to you to decide to participate in this research project. If you agree to participate at any time in this project, you may stop participating without penalty.

What if I have questions?

You can ask Andrew Carter, (302)540-4462/ cartera@campbell.edu; or Dr. Pam Kocher Brown, plkocher@uncg.edu, anything about the study. If you have concerns about how you have been treated in this study call the Office of Research Integrity Director at 1-855-251-2351.

Approved IRB 7/24/18

APPENDIX D
THEMATIC CODEBOOK

Theme: EXPECTATIONS	Subthemes	Definitions	Examples from Transcripts
Philosophy of S&C			
	Injury prevention and athlete optimization	S&C Professionals believe the goals of their training are to reduce the likelihood of injury and improve athletic performance.	<p>“Our three biggest things that we look to achieve with all of our teams are reduced the likelihood of injury within sport . . . being technically driven, sound prescription of training that is not numbers driven . . . and then the second tier is improving overall athletic performance. We want what we do to develop our athletes to a greater degree and basically enhance their ability to play their sport at a higher level . . . then I think the third entity of what we really look to achieve is just improved overall physical mental resiliency” (SC4).</p> <p>“There are three major things that I tried to take care of while I am an athlete is under my care, number one is injury prevention . . . number two would obviously be enhance, enhance the athletic performance for the sport . . . And then the last one is mental skill development. So, you know, usually if the team is out of season then we wrap up sessions with some sort of finisher or something that is pushing them a bit</p>

Theme: EXPECTATIONS	Subthemes	Definitions	Examples from Transcripts
			outside of their comfort zone and have them compete with each other.” (SC6)
		ADs believe the S&C should hold health and safety of the student-athlete as a priority along with physical development.	“Reducing injuries . . . enhancing athletic performance and they need to do it in a safe, positive and productive environment.” (AD6)
			“Develop our student-athletes in a preventative kind of way so they don’t get hurt, but it’s also just to help make them bigger, stronger, faster. That’s pared down to it pretty simple but that’s the way I look at them, just develop them in every kind of way, physically” (AD8)
			“I think everywhere ideally, number one is health and safety and wellbeing of our student-athletes . . . do you have a situation like Maryland? . . . Past health and safety, the number one evaluative piece is in their role is how well the athletes respond to them in the weight room. In other words, are we bigger are we stronger and faster” (AD2).
	Athlete optimization	ADs believe that the S&C professionals’ role are to improve athletic performance.	“What we’re looking for is sport specific development, strength, speed and conditioning so that the student-athletes become better, not just stronger . . .” (AD1).

Theme: EXPECTATIONS	Subthemes	Definitions	Examples from Transcripts
			“They manage the entire 21 sports that we have and over 500 athletes in terms of them getting bigger, stronger, faster . . .” (AD4).

Theme: RESPONSIBILITIES	Subthemes	Definitions	Examples from Transcripts
Of S&C professionals			
	No teaching/research	S&C professionals do not have obligations to teach or conduct research.	“No, I’m not required to teach. I had been offered to teach. We have a phenomenal department here that is trying to grow and to create a strength and conditioning masters. We currently have a strength conditioning minor and they’re trying to grow that program so that it could be similar to what was Springfield College has far as having additional interns and a GA’s” (SC7).
	Sports practice required	Few S&C professionals are required to be at sport practices, while most are encouraged to attend.	“I’m at football practice and women’s lacrosse practices every day. Our other sports in particular are as available as possible within their schedule to be, to be a resource, sometimes an expectation by coaches other times, it’s encouraged but not necessarily a required” (SC4).
	Multiple roles and responsibilities	The job responsibilities of the S&C professional are multiple and vary depending on institution.	“I also facilitate our nutrition center refueling station. The other thing I do is I’m also the exercise science liaison between athletics and exercise science. The other

Theme: RESPONSIBILITIES	Subthemes	Definitions	Examples from Transcripts
			<p>thing is, I do a little bit of fundraising and promotion stuff for athletics as well as working with our chancellor. The other thing would be, is help with event management, different stuff around the university as far as making sure things are taken care of.” (SC5)</p> <p>“ . . . Primarily just making sure that our department, you know, outside of programming and implementing those programs to our athletes, you know, I’m on the other side of campus from the administrative building, so making sure that everything over here is in compliance with, you know, the things that were being held up to as far as NCAA compliance goes and making sure that our nutrition bar is stocked and running a on the budget that we have for that and effectively and efficiently. Making sure that all the coaches on campus are pleased to a degree with what’s going on in here and, you know, making sure that that’s practical and obtainable for my staff, which is me and another full-time employee and then two grad assistants. So just managing and monitoring all that goes on in this room and making sure that our entire athletic department knows that everybody’s being taken care of” (SC2).</p>

Theme: RESPONSIBILITIES	Subthemes	Definitions	Examples from Transcripts
Of Sport Coaches			
Dependent on the sport	S&C professionals believe that sport coach input into their day-to-day responsibilities need to be limited but they understand that the sport coach is ultimately in charge of the team.	<p data-bbox="1272 448 1793 578">“There’s a lot of discussion with them because they have everything broken off by how they would do it because ultimately that is their sport” (SC2).</p> <p data-bbox="1272 610 1793 846">“I think the coaches that ultimately had the most success here are the coaches that allow us to do our job and don’t micromanage what we’re doing. I think, you know, there’s other coaches that don’t abide by that philosophy and they want their hands in a little bit of everything” (SC3).</p> <p data-bbox="1272 878 1793 1380">“It was a very stressful, hard fought battle, but now it’s very different. Rather coaches come in and hang out with us and we have conversations, over training. We talk about the team, they understand where we’re at and they asked what we’re doing to change things and adjust and it’s very, very good conversation, very constructive. And the other part too is we allow them to have a thought. We’d want them to talk to us about training . . . Don’t get me wrong. We do have our differences and we do have some coaches that agree to disagree with different things, but I would think it’s a mutual thing” (SC5).</p>	

Theme: RESPONSIBILITIES	Subthemes	Definitions	Examples from Transcripts
	Collaborative with S&C	S&C professionals believe the relationship with the sport coaches needs to be more collaborative than commanding concerning what goes on in the S&C space.	<p>“I think it’s a collaborative effort. I think one of the things as a staff and that I, I’m a big proponent of is definitely being on the same page as your individual sport coaches and seeing because I think it needs to be a consistent message from all entities of each program” (SC4).</p> <p>“They talk about, hey, we need more strength or hey, we want to see more conditioning, so they’ll give us those physiological wants and then we’ll go and build a program test and retest and kind of develop it. For most part, that’s, that’s how it is. There will be some, depending on the sport, depending on the coach, that maybe some of the other influences” (SC1).</p>
Of ADs	Professional hierarchy	ADs believe they have varying levels of reporting based on the structure of the institution and all S&C professionals report directly to them.	<p>“We have an associate athletic director that works largely with the coaches as the liaison between the coaches . . . an associate athletic director for fundraising and for communications . . . assistant athletic directors who oversee certain areas of business management” (AD4).</p> <p>“I report to the AD. I have a dotted line to the provost” (AD3).</p>

Theme: RESPONSIBILITIES	Subthemes	Definitions	Examples from Transcripts
			<p>“I guess ultimately everyone reports to me. I report directly to the president, we do some sport oversight that is shared amongst, one of the assistant athletic directors and senior associate AD here oversee some of the sports, but that’s really more of a sort of a day to day operational type thing. The really the, the true reporting lines all report directly to me” (AD8).</p>
	<p>Varied duties, sports teams, and roles</p>	<p>AD’s professional responsibilities are varied and numerous depending on the institution.</p>	<p>“I oversee compliance, academics student-athlete development, athletic training and strength and conditioning for right now” (AD2).</p> <p>“I oversee, both the training room and strength and conditioning. I am the sport administrator for track. I’m the sport administrator” (AD3).</p> <p>“. . . sports information, strength conditioning, all of those report to me as well as the coaches and staff” (AD7).</p> <p>“I’m the program administrator of four other sports. The area of strength conditioning for sports medicine reports to me and I also oversee the department’s capital projects. You know, that does not mean development. I don’t raise money. I get to spend it when we raise it” (AD6).</p>

Theme: EVALUATION	Subthemes	Definitions	Examples from Transcripts
NSCA Guidelines			
	Not familiar/ Do not use	ADs are either unfamiliar or do not use the NSCA’s professionals standards and guidelines as a means to perform evaluations.	“I know of its existence and I have not reviewed it” (AD3).
		S&C professionals do not believe that when undergoing an evaluation the NSCA’s guidelines are taken into consideration.	“I’ve seen it, but I’ve never like read it thoroughly, thoroughly” (AD7).
			“I’m gonna assume no [the guidelines are not being used in evaluation]. I’ve never been asked about it or I don’t have any. I don’t have a recollection of what that evaluation system is through the NSCA” (SC6).
			“The problem I have with the guidelines, those guidelines are geared towards a population and written by people for a population that don’t understand how it works . . . I would say the intent is very good and I agree with to some level, but as far as what the NSCA has labeled out and written, I do not agree with and I do not feel that those guidelines work for, for our population.” (SC5)
Communication			
	As a significant form of feedback	ADs believe that evaluations are based on significant levels of communication between them and the S&C professional.	“If there’s issues that need to be addressed and certainly that will drive how often we meet but informal meetings happen all the time, you pop in and so I have a question or hey I need your help with this or I’m having

Theme: EVALUATION	Subthemes	Definitions	Examples from Transcripts
			this issue, can you help me how those things will happen all the time?” (AD2).
			“Everybody knows that every administrator here has an open-door policy. So we don’t wait. If there’s something we need to address, we don’t wait until the next meeting” (AD6).
	S&C professionals believe that communication between the AD and themselves have to be a priority to maintain a cohesive work environment.		“We share ideas and kind of create a common thread or common approach to the way we’re going to do things” (SC3).
			“One of those (staff meetings) being more administrative based, one of those being more discussion and idea based, kind of practical on the floor type stuff. And so I think through having discussions throughout the course of someone being here, I think we kind of get on the same page and share ideas and kind of create a common thread or common approach to the way we’re going to do things” (SC7).
			“A lot of times our communication is through email so she’ll send me important information or like things that I would sign up for to do that are extra. But our conversations about strength and conditioning and are a little bit limited unless it is brought to her attention by me

Theme: EVALUATION	Subthemes	Definitions	Examples from Transcripts
			through an idea, a suggestion I have for the department” (SC8).
	Formal and informal communication	ADs believe that both formal and informal means of communication should occur on a regular basis.	<p>“Not nearly enough (formal communication) those guys down there tend to be hunkered down in their bunkers out back there . . . I do not communicate with them nearly enough, but I think it’s at least adequate” (AD1).</p> <p>“Informal meetings happen all the time . . . Unplanned and pretty frequently” (AD2).</p> <p>“We do senior staff once a week. The strength coach is in that. Then we do a head coaches meeting once a month” (AD8).</p> <p>“We don’t have a quote unquote formal weekly meeting because we’re meeting every day and going through and I personally, I have two daughters that I helped get ready for school, so I’m not in for the 6am lift” (AD6).</p>
		S&C professionals see value in different methods of communication and agree that they need to occur on a frequent basis.	“Once every two weeks of being able to sit down and try to iron out of different things. Of course he’s always available. Like I said, anytime that I’ll reach out to them if I need to talk to him that afternoon, he makes, makes a point to carve out some time” (SC1).

Theme: EVALUATION	Subthemes	Definitions	Examples from Transcripts
Processes of Evaluation	At least yearly evaluations	ADs believe that evaluations should occur at least in yearly increments, while some believe they need to be more frequent.	<p>“I would say biweekly, probably either swinging by the office or exchanging text messages to where we are in communication about smaller more, you know, quick note things” (SC3).</p> <p>“We adhere to whether like a quarterly meeting, a semiannual or annual meeting, but at the end of the day if I, if I need to communicate with him, he’s very good about getting back to me or vice versa if you need something from me, you know, having a direct line of communication” (SC4).</p> <p>“Now as far as the athletic director probably once or twice a day, we will interact and we’ll discuss things about what’s going on, what’s new, what’s going on. But it’s really nothing very concrete, as far as that, it’s more of a very impersonal relationship. We respect each other and what we do and he’s very supportive of me” (SC8).</p>

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			<p>know, to say, hey, we need to improve communication. Communication as a good example because I think almost everyone to continually have that as a goal and work on communication up and down the line for any program” (AD5).</p> <p>[Twice a year] “we set professional expectations, how we treat other people, how we treat each other the way we interact with our student-athletes, what’s appropriate, what’s not, and then what we expect out of position” (AD2).</p> <p>“A 360 evaluation and that they will conduct their own evaluation. Student-athletes evaluate, coaches evaluate, and I’ll get all that and share it with them” (AD3).</p> <p>“The process evaluation for them, in its basic structure is no different than the evaluation for anyone else. We have an institutional structure that we use, where you have certain goals and guidelines that they’re looking to meet. We customize those goals, individual goals between the different people in different programs, but the basic structure is all the same” (AD7).</p> <p>“I do not sit down with a paper at the end of the year and talk about meeting expectations</p>

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			or exceeding expectations or not following expectations . . . there's not a paper formality trail" (AD4).
		S&C professionals are formally evaluated at a minimum of once a year by the AD.	<p>“We had a formal, just a prototypical formal evaluation sheets [with] three questions on it. You jot stuff down. It wasn't something that was very detailed and . . . it wasn't something that we really liked” (SC1).</p> <p>[Annual evaluation was] “for the entire university . . . So I do an evaluation on myself and a lot of it is goals that I set for myself and then answering the question of whether or not I accomplish those. And then also setting goals for the following school year . . .” (SC6).</p> <p>“I do not have a structured objective evaluation measure. I think a lot of our current evaluation manners are subjective through me, and they're generally driven by effectiveness of their training as a practitioner and as a professional. How they conduct themselves as a professional, relationships with ranging from a sport coaching staffs all the way to support staff members in athletic administration” (SC4).</p> <p>“A yearly evaluation typically happens at the conclusion of the school year. Monthly, I provide our athletic director with a report</p>

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Recommendations for Evaluation	Need for objective measures/metrics	ADs believe there is a need for objective measures when evaluating S&C professionals.	<p>that's given him inside as to what we've accomplished in that last month" (SC3).</p> <p>"Once a year. We have our performance . . . we do our performance plans. So we have set goals once a year. We have our performance evals, it goes through each goal and tells us if we are, obviously meeting that goal or not or partially achieving it or not" (SC8).</p> <p>"Well, I don't think that, again, I think if you could develop a tool that it rates performance, which I don't have a way of doing that so much. Any performance is your ability to communicate and, you know, can you convince you guys that they're lifting program you have for them is the best and somehow, you know, to me, I think that's what's immeasurable" (AD1).</p> <p>"I've been an athletic director for 20 years, and it felt like that process works for me, but in light of the legalities that are going to certainly take place, it may require a paper trail. And you hope that that's not just the way it sounds, a formality that doesn't have</p>

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			any teeth behind it, but it probably is going to be necessitated” (AD4).
		S&C professionals believe that evaluations should have a level of objective measures that are outside of wins and losses.	“Making sure that we are making these athletes better and we’re showing you the data that says, Hey, just because our team is not winning . . . don’t necessarily blame strength and conditioning because X, Y, and Z, it’s all improving, and that’s what we talked about” (SC1).
			“I think having a, a wide opinion from everybody, not just coaches but also maybe some of the students. How is it a department as a whole, maybe it’s not just one culture talking about, but how is it apartment and improved, improved over the years” (SC3).
	Challenges creating those measures/metrics	ADs believe that evaluations should be comprehensive but there are a number of challenges to create a standard evaluation because of the complexities of the S&C’s role.	“[S&C professionals] really have an almost impossible job because they’re trying to be everything to everybody all the time. And because of that, having an evaluation and setting goals, it’s pretty complex sometimes . . .” (AD7).
			“I wish I knew more about the strength and conditioning as a supervisor for that area. It feels very awkward to supervise an area that I know so very little about” (AD3).
			“An administrator can’t sit in their office and fill something out about a strength conditioning professional without having a

Theme: EVALUATION	Subthemes	Definitions	Examples from Transcripts
			great deal of time in the area and watching them actually do what it is they do, and that's difficult for an AD to do because they're an AD and whether they get pulled in 42 different directions" (AD5).
			"It's very different and that's why I think it's very important that someone an impartial perspective this was important that they are reporting to someone outside of the coaching staff member, whether it's whatever level of administrator it is, um, because somebody else has to be able to look at the greater good, not just the individual needs. They're, they have a tough gig. That's for sure" (AD8).
	S&C professionals believe that creating a standard evaluation will be difficult because of the many different measures that may play into being a successful S&C professional.		"I don't know what a true evaluation piece would look like. Is it work ethic? Is it attitude? Is it being on time? Is it coaches? If they're happy, is it student-athletes being happy? I think there's so many pieces to try to put it in there. You know, what's a proper evaluation?" (SC2).
			"That's the hard part. I mean there's a qualitative aspect to our job, that it's hard to put into terms. It's hard to measure, but there's also a quantitative aspect and you know, those ones are easier to measure, right? I mean if you're considering it, the injury rate, but for the reality of the

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			<p>complex world that we live in, should you be judged because an athlete had a contact related ACL, you know what I mean? So we're going off injury rates. There's got to be more specificity to it. And so it's tough, right? You know, I actually think that from a measurement point of view, a lot of our job is qualitative" (SC8).</p>
			<p>"It's a tough one . . . I would do it in a couple parts, one would be, is to make sure that the coach themselves, has a way of evaluating their own program . . . And so the evaluation tool would be the periodization model itself and the tracking of numbers, making sure that the strength and conditioning coaches actually being able to facilitate a year round program . . . but to also set up checkmarks that are showing that the strength coach understands what the demands are. So by that would be things like a category of safety, like is the equipment usable, is the equipment in the proper workings to be used this equipment, maintenance, things like that" (SC5).</p>
			<p>"How do you define whether or not the department of successful or not? You can't go off wins and losses for the team. I think that you can maybe evaluate whether or not things like non-contact injuries have</p>

Theme: EVALUATION	Subthemes	Definitions	Examples from Transcripts
			<p>decreased or, you can look at tangible numbers in strength or force or a vertical jump height or something like that. And it's metrics, performance metrics, whether or not the person has been also developing them as human beings and not just athletes. I don't know how you would find the results to this question, but determining whether or not that person is truly there to help develop them as people and support them, and then everything that they do to improve athletic performance is scientifically sound" (AD6).</p>