

Evaluating Student-Athlete Satisfaction of the NCAA Strength and Conditioning Coach

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ABSTRACT

The purpose of this study was to evaluate student-athlete satisfaction with their strength and conditioning coach (SCC) and the services they provide. A secondary purpose was to analyze which demographics correlated with higher or lower satisfaction scores. The strength and conditioning coach student-athlete satisfaction survey (SCC-SASS©) is a newly developed instrument that assesses student-athlete satisfaction levels with their SCC and the services they provide. A sample (n=96) of National Collegiate Athletic Association (NCAA) Division I (DI) and Division II (DII) athletes completed the SCC-SASS©. The overall mean satisfaction score was 128.73 out of 140. Independent T-Tests resulted in no significant differences in mean satisfaction scores between male (128.71) and female student-athletes (128.77) (p=0.982); DI (127.33) and DII student-athletes (128.96) (p=0.679); individual (127.00) and team sport student-athletes (129.37) (p=0.431); between student-athletes who had a professional staff SCCs (129.48) and GA SCCs (124.87) (p=0.317); or a male SCC (128.92) and female SCC (127.86) (p=0.769). Student-athletes showed satisfaction with their SCCs and the services they provide due to a total mean score of 128.73 out of a possible score of 140. The SCC-SASS© can be used as a quality improvement tool as athlete satisfaction has been associated with increased athletic performance.

Keywords: SCC-SASS©, quality improvement, college-aged, athletic performance, sports medicine team.

INTRODUCTION

Today, the strength and conditioning coach (SCC) is an essential member of the sports medicine team and one of the primary contributors to athletic success (12, 19). They play an essential role in the student-athlete's development, therefore it is important that the student-athlete is satisfied with the quality of care and service they provide (22). To date, athlete satisfaction with their SCC and the strength and conditioning services have yet to be thoroughly examined. However, student-athletes' perceptions and the importance of the role of an SCC have been evaluated (10). Generally, student-athletes believed that the programs created by the SCC improve athletic performance; however, they were less committed to attend the strength and conditioning sessions if they were not required (10). Although the main focus of this study was student-athlete's perceptions of the importance of a strength coach, they did include one question relating to overall satisfaction with their SCC. The student-athletes had a mean score of 4.7, asking if they agreed that they were satisfied with their SCC. The score of 5 indicated "strongly agree." The SCC's role is complex, and there are many areas that the student-athlete should evaluate more comprehensively.

Assessing patient satisfaction for sports medicine team members or health care providers is not a new concept and has been studied for decades (1-3, 13, 17, 21, 22). The primary sports medicine team member to be evaluated in this area is the athletic trainer (AT). Two studies that explored student-athlete satisfaction with ATs measured differences in cumulative perception scores by sex, sport profile, and level of competition (NCAA Division I versus Division II) (21, 22). Both studies resulted in no differences between division levels but did find differences between sex and sport profile of the student-athlete (21, 22). An additional component of athlete satisfaction was explored between professional staff or graduate assistant (GA) ATs (11). Student-athletes were ten times more likely to be satisfied with a graduate student AT than professional staff. Still, athletes were satisfied with the quality of care from both groups.

Although this topic is not new to the AT profession, it is new to the profession of strength and conditioning coaches. Recently, a valid and reliable instrument has been developed to evaluate student-athlete satisfaction with their SCC (8). The tool was developed by a group of expert panelists through the Delphi Method and is named the strength and conditioning coach student-athlete satisfaction survey (SCC-SASS©) (8). Knowing the level of satisfaction among student-athletes can help the SCC improve their delivery of services, which can improve student-athlete satisfaction and ultimately student-athlete performance (21).

The purpose of this study was to evaluate NCAA Division I (DI) and Division II (DII) student-athlete satisfaction levels with their SCC and the services they provide, using the SCC-SASS©. In addition, this study aimed to evaluate how different variables; male and female athletes, NCAA DI or DII athletes, and individual or team sport athletes, male or female SCCs, and GA or professional staff SCCs could impact satisfaction level.

METHODS

A snowball recruitment method was implemented with the PI's professional network, where university SCCs, and athletic directors (ADs) were contacted via email to gain permission to research student-athletes (9). NCAA DI and DII student-athletes were invited to take the SCC-SASS© via Qualtrics to evaluate their total satisfaction scores with their SCC

and the services they provide. If the student-athlete had multiple SCCs they were asked to answer the survey regarding their primary SCC. The study was approved by the institutional review board at Rocky Mountain University of Health Professions (Provo, UT, USA), and a letter of support was given by the primary institution where athletes were recruited.

Subjects

Student-athletes were required to currently be on a team roster and have an SCC assigned to them in order to participate. The sample consisted of 96 student-athletes who participated in 16 different sports, seen in Table 1. Both male and female, individual and team sport athletes participated.

Table 1. SCC-SASS© Demographics

NCAA Division	Percentage (100%)	Participants (n=91)
Division I	13.18%	12
Division II	86.81%	79
Sex		
Male	46.15%	42
Female	53.84%	49
Sport Type		
Individual	26.66%	24
Team	73.33%	66
Sport Participation		
Baseball	7.69%	7
Basketball	5.49%	5
Cross-country	2.19%	2
Soccer	7.69%	7
Track	3.29%	3
Volleyball	9.89%	9
Wrestling	10.98%	10
Softball	3.29%	3
Football	8.79%	8
Golf	2.19%	2
Tennis	2.19%	2
Gymnastics	3.29%	3
Lacrosse	16.48%	15
Hockey	3.29%	3
Swim & Dive	14.28%	13
Field Hockey	1.00%	1

Instrument

The SCC-SASS© consisted of 32 items. The first

27 items utilized a 5-point Likert scale from very dissatisfied (1) to very satisfied (5) (9, 15). The remaining five items had a dichotomous response of either yes or no. In order to quantify the summative student-athlete satisfaction score, a respective point value was assigned to each response (e.g., very dissatisfied a point value of 1, very satisfied a point value of 5). For the dichotomous questions, a no was assigned a point value of 0 and yes a point value of 1. The SCC-SASS© consisted of five categories: Social Dynamics with two items, Instruction with six, Professionalism with eight, Services of the SCC with 14, and Nutrition Education and Counselling with two. The entire survey had a maximum value of 140 points.

Statistical Analysis

Data were screened for accuracy, completeness, and normality. Descriptive statistics were used to describe participant characteristics. Mean total satisfaction scores were reported. Five Independent t-tests were run, comparing mean satisfaction scores between male and female student-athletes, DI and DII student-athletes, individual and team sport student-athletes, between student-athletes who had professional staff SCCs and GA SCCs, and those who had male or female SCCs. Statical calculations were completed using IBM SPSS Version 25. Significance was set at $p < 0.05$.

Results

A total of 96 student-athletes started the SCC-SASS©, four of them indicated they did not have an SCC assigned to them which excluded them from completing the survey, leaving 92 to complete the survey. Ninety-one were included in the analysis since one was eliminated as an outlier and as the only Division III response. The overall mean satisfaction score was 128.73 out of a possible score of 140.

There were no significant differences between the five Independent t-tests, see Table 2. However, slight differences did occur. Males were more satisfied than females and NCAA DII student-athletes were more satisfied with their SCCs than DI student-athletes. Team sport student-athletes were more satisfied with their SCCs than individual sport and student-athletes were more satisfied with professional staff compared to GA SCCs. Finally, student-athletes who had male SCCs were more satisfied compared to those who had female SCCs.

DISCUSSION

To put the overall SCC-SASS© score in context, student-athletes who answered a four on the Likert scale indicating "satisfied" for the 27 Likert questions (108pts), and yes on the remaining five dichotomous questions (5pts), would have a score of 113 points. Therefore, with the mean score of this sample being higher than that, athletes can be considered satisfied to very satisfied with their SCCs and the services they provide. Since this is the first study to evaluate student-athlete satisfaction with

Table 2. t-test results

Athlete Sex	Mean (SD)	95% CI	df	t	P	ES
Male	128.71 (13.32)	124.68, 132.74	89	-0.023	0.982	0.004
Female	128.77 (12.06)	125.39, 132.15				
NCAA Division						
Division I	127.33 (11.62)	120.75, 133.91	89	-0.416	0.679	0.133
Division II	128.96 (12.78)	126.14, 131.77				
Sport Type						
Individual	127.00 (13.13)	121.75, 132.25	89	-0.791	0.431	0.185
Team	129.37 (12.42)	126.37, 132.36				
SCC Level						
GA	124.87 (14.18)	115.04, 134.70	83	1.007	0.317	0.349
Professional Staff	129.48 (12.13)	126.77, 132.19				
SCC Sex						
Male	128.92 (12.64)	126.08, 131.76	89	0.295	0.769	0.083
Female	127.86 (12.68)	121.44, 134.27				

their SCCs, the majority of the discussion will be supported by studies that analyzed student-athlete satisfaction with ATs, as it is a similar relationship. Of these studies, only one study examined overall satisfaction levels of student-athletes, which had similar results to the our study where student-athletes were satisfied with the care they were receiving from their ATs (18).

There were no differences in the mean satisfaction scores between male and female student-athletes. There were also no differences between male and female student-athletes in a similar study regarding satisfaction levels with their ATs (18). These results differed from two comparable studies that did find significant differences in satisfaction between males and females with their ATs (20-22). Another layer was looking at a student-athlete's preference for ATs of the same sex. In this study, females significantly preferred female ATs over males and male student-athletes slightly preferred male ATs (6). Another study found that male athletes had significant differences in their preference towards male ATs, and female athletes had a strong preference for female ATs, especially when it came to gender specific injuries (16). It seems plausible that the satisfaction differences between male and female SCCs were not obvious here due to the role of the SCC often being less hands on and personal compared to that of an AT. Ideally, there should be no differences in satisfaction between males and females, inferring they are receiving a similar athletic experience related to the SCC and the services they provide, as was seen here.

No differences were found in satisfaction levels between DI and DII athletes. Similar results were found in two studies evaluating student-athlete satisfaction with the AT (21, 22). The original intent for this study was to include DIII student-athletes, but unfortunately the process of recruiting made it apparent that many DIII universities do not have SCCs, and ones that do are often a department of one making it difficult to participate in research. If that were not the case, this study may have had a similar result to a study evaluating DII and DIII student-athlete satisfaction with ATs, where they found significant differences between divisions (18). Athletes participating in satisfaction surveys have traditionally been split into high and low profile sports, where high profile sports included men's football, baseball, and basketball and women's basketball. High profile sport athletes are consistently more satisfied with their ATs (14, 21, 22). Both men's football, basketball, and women's basketball

produce more revenue for universities, which could help explain why other authors have categorized athletes this way (7). In the current study, the authors determined to separate student-athletes into team and individual sports making this the first study to analyze student-athletes in this way. The results of these groups showed no differences in satisfaction between individual and team sport athletes.

Many athletic departments have GA SCCs, in addition to their professional staff SCCs. The current study showed no significant differences in student-athlete satisfaction levels between these groups, although there was a near 5 point higher mean satisfaction with professional staff. A similar study had the same results where student-athletes had slightly higher perception scores with their professional staff ATs compared to GA ATs (4). The implication could be that GAs have less experience than professional staff. Additionally, many GAs are close in age to the student-athletes they are coaching, so attaining respect may prove more difficult. Conversely, one study found the likelihood of student-athletes being satisfied with a GA to be ten times greater than a professional staff AT, although they were still satisfied with both (11). The reason could be due to GAs having greater availability than the full-time ATs who have more responsibilities (11).

The current study resulted in no differences in student-athlete satisfaction between those with a male SCC and those with a female SCC. A similar study found that females preferred female ATs over males and male athletes preferred male ATs over females (5). The preference was reinforced in another study when asked about gender-specific injuries (16). The lack of athlete satisfaction differences in this study could be due to the role of the SCC being less hands-on when compared to the treatment they receive from their AT. It is beneficial to see similar satisfaction scores in this case, showing both sexes are equally proficient at delivering strength and conditioning services.

The developed SCC-SASS© is the first survey to fully assess the satisfaction of student-athletes with their SCCs and services they provide. Before this study, the level of student-athlete satisfaction with their SCC and their services was unknown. As the role of the SCC continues to evolve into an integral member of the sports medicine team, there must be emphasis on quality of care and delivery of services to increase the value of the profession moving forward.

PRACTICAL APPLICATIONS

The SCC-SASS© has the potential to ensure higher athlete satisfaction and subsequently increase athletic performance and coaching performance. The SCC-SASS© can be used as a valuable assessment tool, administered as a baseline and re-assessed periodically to measure changes in athlete satisfaction. The SCC-SASS© took on average 5 minutes to complete, making it a quick way to accomplish this task.

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