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Donovan J. Nelson
Graceland University

Stephen W. Dittmore
University of Arkansas

Sarah Stokowski
Clemson University, stoko@clemson.edu

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An Analysis of Scholarship Distribution by NCAA Division I Softball Coaches

*Donovan J. Nelson
Graceland University*

*Stephen W. Dittmore
University of Arkansas*

*Sarah Stokowski
Clemson University*

The purpose of this study was to explore fairness factors used by NCAA Division I head softball coaches in scholarship distribution. Research by Hums & Chelladurai (1994a, 1994b) introduced Distributive Justice principles to intercollegiate athletics, indicating need was a popular distribution principle. This study used a single scenario of grant-in-aid distribution with six possible decisions coaches make to determine fairness of grant-in-aid allocation, using a one-way between subjects ANOVA measuring fairness of allocation principles by NCAA Division. Perceptions of fairness varied across different divisions. FBS Autonomy 5 participants perceived an athlete's performance the previous year to be most fair, while FBS, FCS, and I-AAA participants perceived student-athletes who play key positions to be most fair. In addition, participants were asked to determine which of the six allocation methods was most fair and determined student-athletes who play key positions was most fair and those student-athletes with the greatest need as least fair.

Introduction

The Amateur Softball Association (ASA) was founded in 1933 when the sport had grown to require governance and rules consistency (History of USA Softball, 2016). Softball, at the time, was considered fast-pitch and the ASA was the exclusive softball organization for over 50 years. Additional softball organizations, such as the United States Slow-pitch Softball Association (USSSA) was formed in the late 1960's to provide a new form of play to the game that was dominated by pitching. The USSSA underwent a name change in 1998 to the United States Specialty Sports Association, beginning girls fast-pitch softball. In the summer of 2016 the USSSA registered over 15,000 girl softball teams between the age groups of 12-Under and 18-Under. The ASA had 71,780 youth softball teams register with their organization in 2015 (ASA/USA Youth Softball, 2015). The ASA was the exclusive softball organization for over 50 years but the creation of competitor organizations, designed to challenge and draw teams away from the ASA, began in the mid 1980's with the creation of the National Softball Association. The growth of softball continued between these two organizations creating extreme softball tournament numbers (Tanier, 2012). Another player in the competitive softball world is an organization formed in 2013 called Premier Girls Fast-pitch (PGF). This organization is primarily housed in California but the highest-level teams across the country play PGF and it is now recognized by top college coaches as a viable recruiting tool. Softball has been part of American culture since its creation in 1933 but it wasn't until softball was added to the 1996 Olympics that participation numbers in summer softball programs begin to increase (Dickson, 1994).

Due to increased participation at the youth travel ball level and at the interscholastic level there are more players seeking scholarships at the collegiate level. According to scholarship-

stats.com (n.d.) there are 1,673 collegiate softball programs which provides intercollegiate softball opportunities to 31,406 student-athletes with an average roster of nineteen. Because softball scholarships are equivalency based (NCAA, 2016a), meaning partial scholarships can meet the allowed limit, there are more opportunities for softball student-athletes to receive a scholarship, though not likely full.

Table 1
*Odds of a Female High School Softball Student-Athlete
Competing at a College Level*

Category and Classification of Play	Percentages
High School Softball Players	371,891
Intercollegiate Softball Players	30,874
Percentage of High School Softball Players playing Intercollegiate Softball	8.30%
% of high school athletes playing at the NCAA Division I level	1.60%
% of high school athletes playing at the NCAA Division II level	1.50%
% of high school athletes playing at the NCAA Division III level	2.00%
% of high school athlete playing at the NAIA level	1.10%
% of high school athletes playing at the NJCAA level	1.60%
% of high school athletes competing in other levels	0.50%

According to scholarshipstats.com (n.d.), the 2015 – 2016 academic year showed an average of 19 scholarships awarded per NCAA Division I institution, with a low number of 13 and a high

number of 24. This resulted in an average award amount of \$20,715 per scholarship. The low scholarship reported was \$7,281 and the high was \$47,624. It is important to recognize the need for softball programs to evenly distribute their scholarships through their recruiting classes. Therefore, theoretically, only 25% of the allotted scholarships are distributed each recruiting year. Informed by Organizational Justice Theory (Greenberg, 1990), the purpose of the study was to examine what Division 1 head softball coaches consider fair or unfair as they decide how to distribute scholarship dollars. Specifically, this study strives to accomplish the following objectives:

1. To determine what coaches identify as most important athlete characteristics for grant-in-aid distribution.
2. To analyze the effect of NCAA division on perception of fairness for grant-in-aid distribution.

Research Question

RQ1: Are there differences in perceptions of fairness for grant-in-aid distribution based on NCAA division.

Review of the Literature

According to Acosta and Carpenter (2014), intercollegiate athletics for women is at an all-time high. There are more sports for women than ever before and more opportunities for women to participate in intercollegiate athletics than ever before. As these programs continue to grow society would be tempted to focus on the efforts of those currently competing citing travel rigors or scheduling conflicts as great challenges to today's student-athletes (Acosta & Carpenter, 2014). These rigors or challenges have not slowed participation of interscholastic and recreation softball.

Overview of Organizational Justice Theory

Greenberg (1990) defined organizational justice as an individual's perceptions of fairness within an organization. The theory of organizational justice attempts to explain the role fairness has on the functioning of an organization. (Patrick, 2004). Organizational justice literature attempts to describe and explain the role of fairness as a workplace factor (Greenberg, 1990). Organizational justice literature is comprised of four waves of research and theory development: the distributive justice wave, procedural justice wave, interactional justice, and integrative wave (Mahony, Hums, Andrew, & Dittmore, 2010). This study will address distributive justice. Distributive justice, as defined by Greenberg (1990), is an individual's judgment or perceived fairness of resource allocation, based upon the produced outcomes of the individual compared to the expected inputs. As mentioned, Adams' (1963, 1965) theory of inequity is rooted in distributive justice theory. Adams recognized that people evaluate equity when they review the effort and reward each contributes to the organization while comparing their contributions to other workers within the same organization. If an individual feels their contributions outweigh a co-worker's, yet the co-worker receives more in terms of resources, recognition, or reward, there is a justifiable anger. Because of this, according to Adams (1965), workers will reduce their work load to adjust their perceived fairness.

Most work focused on organizational justice in intercollegiate athletics begins with the work of Hums and Chelladurai (1994a). According to Hums & Chelladurai's (1994a) research, seven principles of allocation were used. Those include (a) equality of treatment; (b) equality of results; (c) quality of opportunity, as well as contributions based on (d) productivity; (e) effort; (f) ability; and (g) need. As well, they added (h) spectator appeal as a contributory factor. This third factor was added because sport, in America, is unique and certain sports like football and basketball will attract

more spectators regardless of a team's win-loss record (Mahony et al, 2010). In addition to the eight principles of distributive justice that were applied in the distribution or retribution of money, facilities and support services differences among subgroups were defined by (a) gender, (b) divisional membership, and (c) position (Hums and Chelladurai, 1994a). The subgroup of gender notes the difference between coaches and administrators and their perceptions of distributive justice, which is grounded in performance. In addition to the variable of gender, there is thought that distributive justice principles vary according to the division in which they participate. Emphasis is likely to be different in divisions between spectator appeal, media coverage, and possible revenue generation. The researchers also identified the variance between positions and their ideas of distributive justice. It is likely that coaches and administrators differ in the emphasis of distribution (Hums & Chelladurai, 1994a).

Hums and Chelladurai (1994b), took a stratified random sample of 100 athletic administrators from each of the three NCAA divisions, I, II, and III, which included 50 men and 50 women, producing a total sample size of 300 athletic administrators. After institutions were randomly selected, a male or female was randomly selected from that institutions list of administrators. The coaches were selected similarly. They surveyed 300 athletic administrators and 300 coaches from divisions I, II, and III. They received 328 usable instruments, which included 152 males and 176 females. There were 101 respondents from Division I, 117 from Division II, and 110 from Division III. Fifty-eight subjects identified themselves as administrators, 132 identified themselves as coaches only, and 138 identified themselves as coaches and administrators (Hums & Chelladurai, 1994b).

The instrument used in this study was developed by Hums and Chelladurai (1994b) and included scenarios depicting resource distribution and resource retribution. The resources were money,

facilities, and support services. Within each scenario, subjects rated the justness of each distribution principle on a 7-point Likert scale and chose which principle they, individually, would use. As stated above, comparisons were made by gender, division, and position (coach, athletic administrator, coach/athletic administrator) (Hums & Chelladurai, 1994a; Mahony et al., 2010). The initial pilot study used a stratified random sample of 20 administrators from each of Divisions, I, II, and III for a total of 60 administrators (Hums & Chelladurai, 1994a). The results showed the principles evaluated highest by all three subgroups (gender, position, and divisions) were equality of treatment, need, and equality of results (Hums & Chelladurai, 1994a; Mahony & Pastore, 1998; Mahony et al., 2010). Test-retest reliability was established by distributing a shorter version (6 scenarios) to 100 randomly selected subjects who had responded to the longer version (12 scenarios). Their ratings of the eight principles in the shorter version (posttest) were correlated with the corresponding ratings in the same scenarios in the previous and longer version (pretest). This resulted in 48 correlations, all of which were significant (Hums & Chelladurai, 1994a).

Additional research has been derived from the foundations set by Hums and Chelladurai. Mahony & Pastore (1998) examined participation opportunities, revenues, and expenses at NCAA institutions from 1973 to 1993. Their support of the original research by Hums and Chelladurai was to better understand whether need and equality were the main principles affecting distributions. Mahony, Hums and Riemer (2002) went directly to the resource distribution heads and examined responses by intercollegiate athletic directors and athletic board chairs. This study was distinctly different because of its sole focus on financial resource allocation in intercollegiate athletic departments. The results of this study were not significantly different from Hums and Chelladurai's (1994a) study. The primary difference was in the results between divisions

of play. Division I respondents noted that equity was fair if results were quantifiable and, similarly, if resources were to be taken away, it could be justified as equitable so long as it could be quantified. There is concern, however, by Mahony et al., (2002) that respondents may have held their responses back because their answers may not be socially acceptable (Mahony et al., 2010). This variance in responses prompted Mahony, Hums and Riemer (2005) to complete a follow-up study in intercollegiate athletics.

Mahony et al's (2005) research identified three general reasons why the sports had the greatest needs. They include: (a) a lack of resources available for the team, (b) the high costs associated with the team, and (c) the level of resources needed by the team to be competitively successful. This concept is not new as previous research identified a lack of resources as a significant factor for identified need. This lack of resources indicates decision makers recognize the new difference between a greater need for financial resources and the previous thoughts that if one had less than others, it deserved more. Because of the nature of the two positions, athletic directors and board chairs view need differently (Mahony et al., 2010). The primary category of need was the lack of available resources (Mahony et al., 2005). This category is consistent with previous research conducted by Deutsch (1975) and Hums & Chelladurai(1994a). The challenges of need were addressed in capital and scholarships. Scholarships were also referred to as human capital (Mahony et al., 2005). Without the funds needed to fully fund scholarships athletic directors recognized the challenges for program success.

Methodology

The purpose of the study was to examine what Division I head softball coaches consider fair or unfair as they decide how to distribute scholarship dollars.

Research Design

This study incorporated a survey design. In this study, the entire population of NCAA Division I softball coaches was included in the sample. To advance the existing body of work on the fairness principles established by Hums and Chelladurai (1994a), the research perspective utilized for the present study was a quantitative study.

Participants and Procedure

Participants were based on a list of colleges and universities who offer softball at the NCAA Division I level. This list comprises a list of the institutions, their classification (Division I), conference, and state (NCAA, 2016b). Upon receiving approval from the Institutional Review Board (IRB) emails containing the link to the online survey and related instructions were sent to the selected sample. For three consecutive Mondays, head softball coaches in the sample were sent a reminder e-mail to complete the survey.

Instrumentation

Scenario formulation. Because this study was determining what characteristics NCAA Division I softball coaches use to decide how to allocate grants-in-aid, one scenario was used with five examples for fairness. The scenario was formulated based on established works by Hums and Chelladurai (1994a; 1994b), Mahony and Breeding (1999), and Mahony et al., (2002). Subjects viewed one scenario to highlight fairness as related to grants-in-aid distribution. The scenario evaluated fairness by asking the coach to rate the six examples for which grants-in-aid may be distributed. In addition to the scenario, demographics were requested and importance of student-athlete characteristics was asked.

Pilot study. Face validity, the degree to which the instrument measures what is expected, was established through a pilot study. The instrument was presented to 10 head softball coaches in a south-central NAIA conference to establish whether the scale was readable and understandable.

Operationalization of the independent variables. Based on the review of literature, the two independent variables in this study were gender and NCAA level. As noted in the literature review, both variables produced statistically significant results in previous studies addressing athletics and distributive justice. Gender will be nominally scaled and defined as male or female, which respondents will select in the online survey.

NCAA division was a nominally scaled variable with four levels: FBS Autonomy 5, FBS, FCS, I-AAA. As the coaches are aware of their institution's NCAA divisional affiliation, it is expected they will note the correct classification on the online survey. Based on Mahony et al., (2001), NCAA division warranted further study as divisional differences, such as need, was a consistently cited principle, but need could be due to several factors.

Operationalization of the dependent variables. The instrument was interval scaled and based on prior studies (Hums & Chelladurai, 1994a; Mahony & Breeding, 1999; Mahony et al., 2002; Mahony et al., 2005; Mahony & Pastore, 1998; Tornblom & Jonsson, 1987). Respondents read a scenario and rated five statements based on a 7-point Likert scale measuring the perceived fairness of five distribution methods. Equality of treatment was a distribution method that subjects in prior studies rated a preferred method of distribution. Because no research on fairness of grant-in-aid distribution has been done, a scenario was written to incorporate the distribution of scholarship monies for softball student-athletes. Respondents read the scenario, regarding allocation of annual softball grants-in-aid and then rated the perceived fairness of equality of distribution, previous season performance, stu-

dent-athlete's financial need, hardest working student-athletes in the previous season, and equal distribution for returning student-athletes with incomers equally sharing remaining monies.

Data Analysis

Data were imported into SPSS from Qualtrics and then an ANOVA was conducted in SPSS. Descriptive statistics were produced from five student-athlete characteristics measuring respondents' perception of importance as measured on a 7-point Likert type scale. A one-way ANOVA was conducted for each of the five characteristics against each of the four NCAA divisions. As well, descriptive statistics were produced from one scenario asking respondents to determine levels of fairness of six student-athlete characteristics measured on a 7-point Likert type scale. A one-way ANOVA was conducted for each of the six characteristics of fairness against each of the four NCAA divisions. Finally, because no statistical significance was found between any of the 11 characteristics and NCAA divisions, post hoc test of effect sizes were calculated using a Cohen's *d* test.

Results

The purpose of the study was to examine what Division I softball coaches consider fair or unfair as they decide how to distribute scholarship dollars, according to division of play, gender, and years of head coaching experience. There are 295 NCAA Division I softball programs. At the time of distribution, 16 emails were invalid and 17 universities would not release the email addresses of the head coach. Therefore, 262 online surveys were distributed to NCAA Division I softball coaches. There were 42 responses for a return rate of 16%.

Table 2
Numbers of Participants by Gender

	Frequency	Percent
Male	16	38.1
Female	26	61.9
Total	42	100.0

Table 3
Number of Participants by Division

	Frequency	Percent
FBS Autonomy 5	11	26.2
FBS	8	19.0
FCS	15	35.7
I-AAA	8	19.0
Total	42	100.0

Survey participants were asked to indicate how important they perceived five student-athlete characteristics were when deciding grant-in-aid allocation. Respondents rated Athletic Ability as most important ($M = 6.61$, $SD = 0.49$) and Proximity as least important ($M = 2.80$, $SD = 1.69$). There were no significant findings between division and financial need, $F(3, 38) = 0.80$, $p = .50$, athletic ability $F(3, 38) = 0.90$, $p = .44$, family situation, $F(3, 38) = 0.57$, $p = .63$, academic ability, $F(3, 38) = 0.32$, $p = .80$ and proximity, $F(3, 38) = 0.82$, $p = .48$. See Table 3 for complete results.

Table 4
Perceived Importance of Student-athlete Characteristics

Variable	Overall M (N = 42)	Overall SD	FBS Auto 5 N	FBS Auto 5 M	FBS Auto 5 SD	FBS N	FBS M	FBS SD	FCS N	FCS M	FCS SD	I-AAA N	I-AAA M	I-AAA SD
Financial Need	4.95	1.30	11	5.18	0.98	8	5.25	1.28	15	4.53	1.45	8	5.12	1.45
Athletic Ability	6.61	0.49	11	6.81	0.40	8	6.62	.51	15	6.53	.51	8	6.50	0.53
Family Situation	4.76	1.12	11	4.81	1.07	8	5.00	0.75	15	4.46	1.24	8	5.00	1.30
Academic Ability	6.14	0.78	11	6.09	0.70	8	6.00	0.92	15	6.13	0.83	8	6.37	0.74
Proximity	2.80	1.69	11	3.00	1.84	8	3.25	2.18	15	2.86	1.55	8	2.00	1.19

Table 5
Descriptive Statistics for Distribution Methods Considered Most Fair

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Equal aid	42	1.00	6.00	3.11	1.54
Previous performance	42	2.00	7.00	5.07	1.23
Greatest need	42	1.00	6.00	3.35	1.58
Worked hardest	42	1.00	7.00	4.28	1.27
Returners same aid	42	1.00	7.00	3.66	1.76
Key positions	42	2.00	7.00	5.40	1.36

In addition to the previously addressed questions of fairness, respondents were asked to rate which of the six allocation decisions regarding distribution of annual softball grants-in-aid were most fair (see Table 4 and 5).

Table 6
Questions of Fairness Frequency Distribution

	Frequency	Percent
Equal aid	7	16.7
Previous performance	8	19.0
Greatest need	1	2.4
Worked hardest	3	7.1
Returners same aid	5	11.9
Key positions	18	42.9
Total	42	100.0

Because there was no statistical significance when evaluating respondent's perception of importance, a post-hoc effect size analysis is useful in aiding interpretation of results as effect size can explain the extent to which groups differ in a population on a dependent variable (Stevens, 2002). There was a moderate effect between FBS Autonomy 5 and FCS ($d = 0.53$) and between FBS and FCS ($d = 0.52$) respondents when determining importance of the financial need of the student-athlete. FCS respondents averaged fewer scholarships to distribute implying they may rely more on student-athletes who qualify for federal or state monies to supplement the scholarship. When determining importance of a student-athlete's athletic ability there was a moderate effect ($d = 0.61$) between FBS Autonomy 5 and FCS as well as a moderate effect ($d = 0.66$) between FBS Autonomy 5 and I-AAA respondents. FBS

Autonomy 5 universities place a greater importance on winning (e.g., Chudacoff, 2015; Oriard, 2009) and determine athletic ability as a significant factor. Determining importance of a student-athlete's family situation did not result in statistical significance but did reflect a moderate effect ($d = 0.53$) between FBS and FCS coaches. There were multiple effects when coaches determined importance of a student-athlete's proximity of their hometown to campus. There was a moderate effect ($d = 0.66$) between FBS Autonomy 5 and I-AAA coaches, a moderate effect ($d = 0.74$) between FBS and I-AAA coaches, and a moderate effect ($d = 0.63$) between FCS and I-AAA coaches.

Discussion

The purpose of this study was to examine the differences of NCAA division on coaches' fairness perceptions of grant-in-aid allocation. NCAA Division I institutions place a high emphasis on winning and thus responses were reflective of this priority. Previous research by Mahony et al., (2002) revealed perceived fairness on multiple scenarios of income distribution and retribution. This study is grounded in the same distributive justice theory, only focused on coaches' perceived fairness of grant-in-aid allocation at the four levels of NCAA Division I softball. Coaches determined importance of student-athlete characteristics differently. Athletic Ability had the greatest overall mean ($M = 6.61$), whereas proximity of the student-athlete's hometown to campus was deemed least important ($M = 2.80$). FBS Autonomy 5 coaches rated athletic ability highest ($M = 6.62$). A student-athlete's proximity was rated highest by FBS coaches ($M = 3.25$).

Table 7 summarizes differences in fairness perceptions by NCAA sub-divisions.

Table 7
*Means of Fairness Perceptions of Distribution Methods
 by NCAA Subdivisions*

	Autonomy 5	FBS	FCS	I-AAA
Financial need	5.18	5.25	4.53	5.13
Athletic ability	6.82	6.63	6.53	6.50
Family situation	4.82	5.00	4.47	5.00
Academic ability	6.09	6.00	6.13	6.38
Proximity	3.00	3.25	2.87	2.00
Equal aid	3.55	2.75	3.33	2.50
Previous performance	5.27	5.38	4.80	5.00
Greatest need	3.45	3.13	3.40	3.38
Worked hardest	4.09	4.38	4.27	4.50
Returners same aid	3.27	4.75	3.33	3.75

Levels of Importance Means Summary

Evaluating the means of the five questions of importance did not reflect significance. The question of importance regarding financial need of the student-athlete, was not statistically significant, however, differences between FCS and the other subdivisions suggest a varied view of importance when it comes to scholarship distribution based on the financial need of the student-athlete. Seven FCS programs were fully funded (12 scholarships) while eight programs averaged 8.32 scholarships, ranging from zero to 11. Of those programs not fully funded, the average roster size was 20.50 student-athletes, with an average grant-in-aid distribution of 0.40 scholarships per student-athlete. It is possible that coaches perceived the importance of financial need of the student-athlete to utilize federal assistance monies awarded to student-ath-

letes who meet financial levels of need, reducing the need for scholarship monies to them, allowing for more monies to distribute to student-athletes who do not meet the federal threshold for assistance. This is supported by the moderate effect between FBS & FCS on the financial need of the student-athlete ($d = 0.52$) as well as a moderate effect between FBS Autonomy 5 and FCS ($d = 0.53$).

A second question of importance, the student-athlete's athletic ability, also did not reflect significance but the variance between FBS Autonomy 5 coaches and I-AAA coaches was interesting. Scholarship distribution philosophies vary from coach to coach and coaches have the right to distribute grants-in-aid, as they deem necessary. The thought that a student-athlete's playing ability is the exclusive factor for evaluation is inaccurate according to effect sizes between FBS Autonomy 5 and FCS ($d = 0.60$) and between FBS Autonomy 5 and I-AAA ($d = 0.66$). This factor is important when a coach distributes grants-in-aid to potential student-athletes. Though it is not a surprise that athletic ability is a priority for all subdivisions ($M = 6.61$, $SD = 0.49$); it is interesting that those institutions without football (I-AAA) place athletic ability lowest in their factors for scholarship distribution ($d = 0.66$) between FBS Autonomy 5 & I-AAA.

The third question of importance, student-athletes' family's financial situation, again did not reflect statistical significance. The average number of scholarships at FCS institutions is 10.04 scholarships while the average roster size within FCS reflected 20.90 student-athletes per institution. This results in an average distribution of 0.48 scholarships divided between student-athletes. Realizing that not all student-athletes receive equal amounts, coaches whose programs have fewer scholarships to distribute might make the family's ability to contribute to the student-athlete's tuition a priority to allow for the possibility of getting better players with less grant-in-aid monies.

A fourth question of importance, the student-athlete's academic ability, did not reflect statistical significance. There were only low effect sizes between the four subdivisions. As reflected in the results, more emphasis is placed on athletic ability at FBS Autonomy 5 and FBS universities, supporting the perception that less emphasis is placed on a student-athlete's academic ability when determining importance for grants-in-aid distribution. It is thought that had response rates been higher significance would have been found between the various subdivisions as related to a student-athlete's academic ability. If a university does not have football and the revenue it creates, scholarship monies may be limited in non-power and non-revenue sports like softball. This may cause coaches to place more importance on a student-athlete's academic ability to provide academic monies to pay for the athlete's cost of attendance. This would allow the coach to use fewer athletic grant-in-aid resources on high academic achievers, saving softball grants-in-aid for those who do not achieve as high, academically. Of the eight I-AAA respondents, four programs were fully funded with 12 scholarships. The average number of scholarships for this subdivision is 9.40 divided by an average roster size of 21.25 only allows 0.44 scholarships per roster member at the I-AAA institutions who responded.

The fifth and final question asked coaches to rate the importance of the proximity of the student-athlete's hometown to campus. Although the mean scores of subdivisions do not reflect statistical significance, it is surprising that I-AAA coaches rated the importance of proximity as low as they did considering the perception that FBS schools recruit nationwide and lower level programs recruit from a smaller radius from campus. This supports the thought that I-AAA universities, typically more regionally based, consider student-athletes who live closer who could live at home while attending classes and playing softball, resulting in a decreased cost and less reliance on more scholarship dollars.

Level of Fairness Means Summary

One scenario for grant-in-aid distribution was presented to coaches to reflect perceived fairness of six allocation decisions. None of the allocation decisions reflected statistical significance. However, effect sizes reflect the actual difference between subdivisions.

Question of fairness one, equal amounts of aid should be given to each student-athlete, did not reflect statistical significance but indicated I-AAA coaches thought distributing grants-in-aid equally between student-athletes was the least fair method of allocation distribution. This is somewhat surprising considering FBS Autonomy 5 coaches scored this highest in importance than any of the four subdivisions. It would be presumed that FBS Autonomy 5 coaches would be least likely to distribute grants-in-aid equally because of the increased expectation for performance, whereas lower level programs are perceived to need to be competitive but is not likely to be able to perform at a similar level as power 5 universities.

A second question of fairness, student-athletes who performed best in the previous season should receive the most aid, again does not reflect statistical significance. There is, however, a difference between FBS coaches and FCS coaches as they determine fairness. When reviewing the means of the four subdivisions, one notices the drop between a much higher level of importance by FBS coaches ($M = 5.37$) than FCS coaches ($M = 4.80$). This implies FBS coaches are more likely to reward student-athletes with increases in grant-in-aid distribution for exceptional play from one season to another. FCS coaches, however, do not imply performance from year to year affects their decisions for grant-in-aid distribution. This implies these coaches stay consistent with grant-in-aid distribution and once an amount is agreed upon, that amount remains throughout a player's time at the institution. Because FCS programs have fewer grants-in-aid to distribute than

FBS Autonomy 5 and FBS programs, they may be more limited in their allocation flexibility.

When reviewing the means by subdivision from the third question of fairness, student-athletes who need the money the most should receive the most aid, no statistical significance was found. FBS Autonomy 5 coaches were the subgroup who rated this allocation decision the highest. This is surprising considering FBS coaches rated financial need of the student-athlete with high importance.

The fourth question of importance presented to the coaches, student-athletes who worked the hardest the previous season should receive the most aid, was not statistically significant but indicated a difference between FBS Autonomy 5 coaches' perception and I-AAA coaches' perception. The mean for FBS Autonomy 5 coaches ($M = 4.09$) was lower in fairness than I-AAA coaches ($M = 4.50$). Again, this reflects the flexibility in certain levels of others. Coaches of I-AAA programs clearly recognize and reward allocation flexibility to student-athletes whose work hardest. I-AAA coaches are most likely to allocate more grant-in-aid monies to student-athletes who reflect a greater work ethic.

Coaches were asked to rate the level of fairness for the allocation decision, returning student-athletes should receive the same amount of aid as the previous year, with incoming student-athletes sharing equally the remaining aid amount, no statistical significance was found. Only FBS coaches ($M = 4.75$) indicated fairness above the mid-point of the scale. One FBS program reported not being fully funded (6 scholarships to the others with 12). It appears, based on the data, which once a coach decides the amount that will be awarded to a student-athlete, they are most likely to receive the same amount throughout their eligibility, thus creating a cycle of high years and low years depending upon how the awards were distributed. Based on the FBS coaches' level of fairness, they indicate a willingness to see a player through without

adjusting scholarship monies for good performance or poor play. There is little surprise to this effect as there is a perceived need to be competitively successful by FBS Autonomy 5 coaches, thus creating a greater effect between FBS Autonomy 5 and FBS respondents ($d = .81$).

The final allocation decision presented to the coaches was to determine their level of fairness of student-athletes who play key positions should receive the most aid. Even though less than .7 points separate the high (FBS, 5.75) and the low (FBS Autonomy 5, 5.091) FBS coaches rated allocation to players in key positions higher than the other three subdivisions. This is surprising as one would expect FBS Autonomy 5 coaches to consider key positions as more important than other subdivisions, one can see that key positions are a critical component for all subdivisions and is an important factor for grant-in-aid distribution. If a coach places greater emphasis on one playing position over another, is it no surprise that they would support awarding more important positions more scholarship monies.

In addition to evaluating coaches' measure of five questions of importance and six questions of fairness, coaches were asked to choose which of the six allocation decisions they felt was most fair. Participants identified option F, student-athletes who play key positions should receive the most aid, as most fair ($M = 5.40$) and option A, equal amounts of aid should be given to each student-athlete ($M = 3.12$) as least fair (Table 16). However, when forced to choose one distribution principle, participants indicated option A was third fairest (16.7%) and option C was least fair (2.4%) (Table 17). It is not a surprise that option F, student-athletes who play key positions should receive the most aid, was most fair (42.9%). Research identified a dichotomy between how respondents rated importance and fairness and their actual perceptions of the same factors. They identified social pressures and influences that cause coaches to respond in a way that would reflect

societal acceptance more than their personal perceptions of fairness because coaches did not want to be identified as different than the norm or what would be accepted in their respective sports (Mahony & Pastore, 1998).

Limitations

There are certain limitations with all closed-ended, forced-response questionnaires, especially with items like resource allocation. Allocation decisions can depend on many factors and would be analyzed on a case-by-case basis, influenced by specific points of need with the respective coach and program based on subdivision, conference, returning players, etc. A second limitation is the generalizability of the scenario offered and limited number of allocation decisions that were offered. A third limitation to the study was the response rate. With only 42 respondents of the 295 NCAA Division I softball programs, statistical significance was difficult to find. A challenge to research with coaches as respondents is how the timing of their seasons has broadened and the concept of off-season has declined, though contact hours are still limited by the NCAA, expectations of activity of student-athletes is still high and coaches are actively involved in those processes, within the boundaries of the NCAA. An additional limitation is participants were not provided definitions of importance and fairness as part of the instrument and, therefore, it is possible that respondents viewed these constructs differently.

Future Research

For this study, the use of a scenario was based on previous research from Mahony et al., (2002) that different means of resource allocation may attribute to fairness perceptions. In general, *Student Athletes Who Play Key Positions Should receive the Most Aid*, was deemed most fair by nearly half of the respondents. This

study revealed that there are still points of discrepancy between what the softball public perceives coaches use for scholarship distribution, and what coaches perceive as important or most fair. This matches findings from Mahony & Pastore (1998). This similar approach to resource allocation would best be tested by surveying coaches at all three NCAA divisions (I, II, III) as well as at the NAIA level to gain an understanding for how decisions are actually made, regardless of what the coaches perceive is fair. Evaluating the foundational purpose of athletics at each of the seven subdivisions would offer a different perspective in what coaches consider important as well as most fair.

Conclusion

NCAA Division I softball programs are allowed 12 scholarships to distribute as the coaches determine to fill the desired roster. Rosters at NCAA Division I institutions will range anywhere from 15 to 25 student-athletes. Because the necessary roster numbers exceed the allotted scholarships, coaches must be strategic in how they allocate the limited resources.

Although this study did not reveal statistical significance between NCAA subdivisions and any of the five options for importance nor for the six options for fairness, this study is the first to examine the perceptions of importance and fairness among NCAA softball coaches.

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