Int. J. Sport Psychol., 2021; 52: 432-449
doi: 10.7352/IJSP.2021.52.432

To Be or Not to Be Paid? The motivational effects of scholarship removal on Division I NCAA swimmers

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This study examined changes in motivation of a NCAA Division I swim program anticipating the unwilling removal of athletic scholarship. As part of a national study, 62 swimmers completed the SIMS at the beginning of the season (T1) and end of the season (T2), including swimmers from University X (N = 17) who would lose their scholarships the following season. University X participants completed five open-ended questions at T2 regarding their loss of scholarship. Two ANCOVAs with motivation at T1 and gender as covariates compared the motivation at T2 between swimmers who lost their scholarships and the control group. Intrinsic motivation significantly decreased for those who lost their scholarship. Amotivation did not significantly change. Analysis of the open-ended questions showed mixed reactions but found many referenced their three basic needs of self-determination theory were not being met. Our results could increase understanding of the effect of external rewards on intrinsic motivation.

KEY WORDS: Intrinsic Motivation, NCAA athletes, Scholarship, Removal.

Motivation is a heavily studied topic in sport psychology, explored in its relationship with many other factors, such as engagement (Curran et al., 2016), coach-athlete relationship (Solstad et al., 2017), performance (Balaguer et al, 2002), and burnout (Garinger et al., 2018). Research on extrinsic motivators, such as scholarships, in collegiate athletes has been vastly studied, with mixed results (Cremades, 2012; Medic et al., 2007). Very little research has expounded on the motivational effects of scholarship removal, since it has been a rare occurrence in the past. With increasing budget cuts from NCAA and schools, it is likely that non-revenue sports, such as swimming, will have some reduction to their budget, resulting in possible scholarship cuts. Using self-determination theory (Deci & Ryan, 1985), we explored the motivational transitions, feelings, attributions, and reactions of athletes

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experiencing an unforeseeable scholarship loss in a non-hypothetical situation.

Self-Determination Theory

Self-determination theory is a commonly used theory of motivation that posits that the fulfillment of the needs for autonomy, relatedness, and competence enhance motivation (Deci & Ryan, 2002; Duda & Treasure, 2015; Ryan & Deci, 2017). Autonomy is defined as the perception of control of one's own behaviors, relatedness is defined as forming connections and attachments with each other, as well as a sense of belonging, while competence is defined as the perception that one has the tools necessary to succeed (Deci & Ryan, 2002).

Fulfillment of these three basic needs: autonomy, competence, relatedness has proven extremely beneficial to an athlete's sense of wellbeing and their motivation (Adie et al., 2008). When the athletes feel their basic needs are not being met, especially in the case of relatedness and competence there is a higher rate of burnout and lower self-motivation (Franisco et al., 2020). Overall, satisfying the needs of athletes has proven beneficial in promoting quality sport engagement and eudaimonic wellbeing in student athletes (Adie et al., 2008).

Self-determination theory can be divided into different categories along a spectrum of motivation. Amotivation is considered the lowest self-determined motivation (Duda & Treasure, 2015), where one will simply go through the motions and with no purpose or drive to complete the activity. The next category on the continuum of self-determined motivation is external regulation (Deci & Ryan, 1985), where the motivation to perform an action is to meet an external demand. This is followed by introjected regulation, where one performs the action because they will feel guilty if they do not (Deci & Ryan, 1985). Both introjected regulation and external regulation are tied to forms of rewards and punishments, and arguably the types of motivation that come into play when an athlete is awarded a scholarship (Almodóvar, 2017; Duda & Treasure, 2015; Mallett & Hanrahan, 2004). Finally, in identified regulation one performs an action because it is their choice, but only do so because it may benefit their own well-being and desires (Deci & Ryan, 1985). External regulation, introjected regulation, and identified regulation are considered extrinsic motivations. The final category of motivation is intrinsic motivation, where a person participates in an activity solely because they find enjoyment in doing so.

Often, these motivations interact and overlap in high level athletes (col-

lege or professional) (Mallett & Hanrahan, 2004). For example, when an athlete wins a race, perceptions of competence may increase on an intrinsic level, but this may be counteracted by extrinsic rewards such as money or medals perceived as external acknowledgment of competence within the sport (Mallett & Hanrahan, 2004). STD indicates an athlete can by fueled by the intrinsic motivators of interest, curiosity or competition (Ryan & Deci, 2000) while at the same time be rewarded with external motivators of scholarships (Cremades et al., 2012) or the perception of others (DeFreese & Smith, 2013).

The Effect of Scholarships on Motivation

Although most athletes begin their sport when they are younger for the enjoyment or social aspect of the activity, many athletes shift their motivation toward extrinsic rewards, such as scholarship money, as they age (Medic et al., 2007). The effect of scholarships on an athlete's motivation is a common topic of many research studies in sport psychology today (Mertens et al., 2018). Some research shows that an increase in an extrinsic reward, such as a scholarship, is related to a decrease in intrinsic motivation (Cremades et al., 2012; Deci & Moller, 2005). For example, Cremades et al. (2012) compared the levels of intrinsic motivation in college student-athletes and found that non-scholarship athletes had higher levels of intrinsic motivation compared to scholarship athletes. The monetary rewards had a controlling and undermining effect on their internal desire and motivation (Cremades et al. 2012). This perceived pressure to perform at a high enough level to "earn" a scholarship or money is a common factor related to burnout in elite level athletes (Almodóvar, 2017; Mallett & Hanrahan, 2004).

In contrast, some research suggests that scholarship athletes have more intrinsic motivation when compared to those with no scholarship (Amorose & Horn, 2001). In this case, the reward is seen to enhance intrinsic motivation by serving as an acknowledgement to the athletes of their competence (Amorose & Horn, 2001; Mallett & Hanrahan, 2004). Indeed, Hollembeak and Amorose (2005) found in their study that athletes without a scholarship reported lower levels of perceived competence when compared to partial and full scholarship athletes, and that perceived competence was a significant positive predictor of intrinsic motivation. This reminder of competence is a key factor in intrinsic motivation development for self-determination theory (Deci & Ryan, 1985). However, some research finds no significant difference in motivation between scholarship and non-scholarship athletes, nor any change in motivation from pre- to post-season (Amorose & Horn, 2001).

These findings indicate that scholarships may not serve as the primary motivator, but other factors such as coach-athlete relationships and peer influence could be bigger intrinsic motivators.

Trying to consider the coach's influence on the athletes' perception of their scholarship status and how it affected their intrinsic motivation, Matosic et al. (2014) assessed if competence and autonomy could serve as mediators between the scholarship status and intrinsic motivation. The authors found that scholarship status was a nonsignificant positive predictor of competence, but when it interacted with a controlling use of rewards by the coach it became a negative predictor of competence. This result helps explain how scholarships are sometimes linked to higher competence and sometimes linked with lower competence levels. Competence and autonomy, as expected, were positive, significant predictors of intrinsic motivation in this study, working as mediators between scholarship and intrinsic motivation (Matosic et al., 2014).

Aiming to look specifically into the effects of gaining or losing a scholarship could have on intrinsic motivation, Medic et al. (2007) asked 116 college basketball athletes from the United States (currently holding a scholarship) and Canada (currently not holding a scholarship) about their current motivation and hypothetical future motivation if their scholarship status changed (i.e., athletes without a scholarship started to receive one and athletes with a scholarship ceased to receive one). Medic et al found that introducing scholarships to non-scholarship athletes would decrease intrinsic motivation in this hypothetical scenario by creating a perception of a controlling effect on their behavior and an increased pressure to perform. Interestingly, the authors also found that the possibility of losing a scholarship would decrease intrinsic motivation with a sharp decrease in their perceived sense of accomplishment. Medic et al.'s study is noteworthy because it shows that even though starting to receive a scholarship may be perceived as detrimental for intrinsic motivation, once the athlete has the scholarship, losing it can cause further decrease in intrinsic motivation. Medic et al.'s study has some issues, however. First, all participants who did not have scholarship at the time of the study played in Canada while all participants who had a scholarship were Division I NCAA athletes in the United States, where college basketball has a strong status and it is common to have a scholarship, thus representing a different context. Second, the authors used a hypothetical scenario, which may not represent how athletes would actually feel in a real scenario of scholarship gain/loss. Finally, when looking into all previous studies on scholarship and sports motivation, they are all cross sectionals studies, which does not represent the dynamic nature of motivation.

Two important variables to consider in the context of scholarship and

motivation, according to previous research (e.g., Amorose & Horn, 2001), are scholarship amount and gender. Many athletes at the Division I level are not awarded full athletic scholarship; most have some variation of a partial scholarship paired with an academic merit award (Amorose & Horn, 2001). The reward of a partial scholarship may be viewed as an acknowledgement of an athlete's competence, but not as overbearing and controlling as a full scholarship would be (Cremades et al., 2012). The partial scholarship gives the athlete an opportunity to strive for more money (external rewards) but may retain the intrinsic motivation for the sport.

There have also been studies suggesting gender can impact motivation. Cremades et al. (2012) and Fortier et al. (1995) found that women tended to have higher intrinsic and self-determined motivation than men, and lower extrinsic motivation. This may be because women are not given as many opportunities to play at the professional level and therefore remain in the sport for their own personal enjoyment without expecting a profession to come out of it. Males were found to be more motivated by external factors (e.g., travel, wearing team-issued apparel in the community), contributing to their personal sense of pride and competence (Pedersen, 2002). This result is not surprising as men who play sports typically earn and participate in the benefits of being a high-level athlete more than females in the same sport (Abrams, 2019).

Considering the contradictory findings in previous cross-sectional research regarding the effects of scholarship on intrinsic motivation and that the effect of scholarship loss on motivation has only been investigated once in a hypothetical scenario, the current study sought to answer the question: How does scholarship removal change a swimmers' motivation? We investigated changes in motivation in a situation where an NCAA Division I swim team would no longer be given scholarship in the following year. Because Medic et al. (2007) is the only study to date to investigate specifically the effects of scholarship loss on intrinsic motivation, we hypothesized that, similarly to Medic et al.'s findings, athletes who lost their scholarships would experience a decrease in their intrinsic motivation, compared to their own motivation at the beginning of the season and to other swimmers at other NCAA schools who were not losing their scholarships.

Method

Design

This study was part of a larger longitudinal study investigating changes in motivation and stress among college swimmers during one competition season. The main study's survey was

distributed to participants who were enrolled via coach contacts through email or Twitter and consisted of a national sample of NCAA Division I, II, or III swimmers. There were no incentives given to the participants for completing the study. The 15-minute survey asked questions about the athlete's motivation as well as their scholarship status. This survey was taken by all participants at the beginning of the swim season and at the completion of the championship meet. The second part of the study was only completed by the swimmers from one Division I university, hereinafter called University X. Participants from University X were those who would unwillingly lose their athletic scholarships at the end of the school year. This second part of the data collection consisted of an online survey with open-ended questions regarding the individual athlete's feelings toward the scholarship removal and their current motivations to swim. This survey took 15 minutes to complete and also did not provide incentives for participation. This survey was sent out after the last data collection point of the larger study, in mid-March, at completion of the regular season would no longer be guaranteed after this year (2019).

Instruments

Demographics

The Situational Motivation Scale (SIMS; Guay et al., 2000) was used to assess motivation at the beginning and end of the season among all participants. This scale is designed to capture the situational (or state) motivation and assesses several factors that play into motivation: intrinsic motivation, identified regulation, external regulation, and amotivation. We modified the SIMS to fit our participant pool (i.e., tailoring the questions toward swimming). Participants were given the prompt "why are you currently engaged in swimming?" and a series of 16-items in which to respond, such as (1) "because I think that swimming is interesting," (2) "because I am doing it for my own good," (3) "because I am supposed to do it," and (4) "there may be a good reason to do this activity, but personally I don't see any." Each of these statements represent the four subscales: (1) intrinsic motivation, (2) identified regulation, (3) external regulation, and (4) amotivation. Participants were asked to respond on a 7-point Likert scale from 1 (*corresponds not at all*) to 7 (*corresponds exactly*). Scoring was then conducted by adding up the scores on each subscale Cronbach's alpha for each subscale at each time point is reported in Table I.

Qualitative Questions

The follow-up survey for the University X swimmers included five open-ended qualitative questions. The five questions were: (1) "Will you continue swimming for a collegiate team? If yes, what school or potential school are you looking at?", (2) "Why did you decide to leave/stay?", (3) "How do you feel the scholarship removal has affected your overall life, if at all?", (4) "How has the scholarship removal affected your motivation to swim, if at all?" and finally (5) "How do you think the scholarship removal affected the team?"

Table I
Cronbach's Alpha Reliability Table.

	# of Items	**T1**	**T2**
Intrinsic Motivation	4	.84	.90
Identified Regulation	4	.68	.78
External Regulation	4	.84.	.87
Amotivation	4	84	.82

Procedure

After IRB approval, the researchers emailed out a link to the survey on motivation, which contained the items of the SIMS, to all participants at the beginning of the collegiate swim season (September). Participants were instructed to fill out the survey as accurately as possible to reflect how they truly felt swimming impacted them. The same survey was sent out to the same group of participants at the end of the collegiate swim season (March). Additionally, the participants from University X completed the five open-ended questions regarding the potential motivational effects of the impending scholarship loss one week after they had completed the main study's last survey. Participants were again encouraged to be as open as possible about their feelings due to the scholarship loss and were assured of the anonymity in their responses.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) was used to analyze the data. Only participants who completed both surveys (September and March) were included in the data analysis. First, general demographic data was analyzed: the mean, standard deviation, and frequencies. After, two analyses were performed to decide which main analysis was going to be used in the study: a Pearson correlation to assess if there was collinearity among the dependent variables (motivation subscales at the end of the season) and four ANOVAs to assess if there was a difference in motivation depending on scholarship status, which could be a confounding variable. The correlation analysis indicated that intrinsic motivation and identified regulation were highly correlated ($r = .82$; $p = .00$). External regulation was significantly correlated with identified regulation ($r = -.44$; $p = .000$) and amotivation ($r = .59$; $p = 000$). Identified regulation was also significantly correlated with amotivation ($r = -.42$; $p = 001$). Based on this analysis, we decided to run two ANCOVAs instead of one MANCOVA to avoid issues related to collinearity of the dependent variables. The four one-way analysis of variance (ANOVA) with a Tukey posttest compared the levels of motivation among participants in the four scholarship categories (full, partial covering more than 50%, partial covering less than 50%, and no scholarship). Each ANOVA had each of the four motivation subscales as the dependent variable. This analysis indicated that there was no significant difference in the four types of motivation among participants with different scholarship statuses, which alienated this variable as a confounding factor.

Finally, two analyses of covariance (ANCOVA) were run; one with intrinsic motivation and one with amotivation as the dependent variable. The motivation scores for the beginning of the season and gender were used as covariates and scholarship loss was the fixed factor (University X vs. other participants). A G Power analysis indicated that 64 participants would be necessary for an ANCOVA to achieve a power of 0.8 with of .05 and a large effect size in this scenario. Unfortunately, not all participants who completed the survey at the beginning of the season also completed it at the end of the season, which increased the probability of an error in not rejecting the null hypothesis that there was no difference in intrinsic motivation after scholarship loss.

Finally, two waves of qualitative analysis were performed; the first identified general emerging themes in the participant's responses about situation's impact on their team and themselves. Two coders individually coded the data using inductive coding (Saldaña, 2013) and identified four themes: change in motivation (e.g., increased/decreased/no direction), team culture (e.g., positive/negative), attitude (e.g., positive/negative affect), and external influences (e.g., financial, school plan) (see Figure 2). Following agreement on these themes and their definitions, the same two researchers coded the survey responses into these four themes, reached an agreement on any discrepancy, and analyzed the frequency of the responses (Miles et al., 2014). On the second coding wave, researchers coded the participant's responses using deductive coding (Saldaña, 2013) according to the participants' perception of satisfaction or frustration of their three basic needs: autonomy, relatedness, and competence

(Deci & Ryan, 2002). For this second coding wave, the responses were then recoded on a separate coding tree with the 3 basic needs (see Figure 3). The three main themes (autonomy, relatedness, and competence) were then analyzed for frequency (Miles et al., 2014).

Results

All means and standard deviations of the motivational subscales can be found in Table II.

Intrinsic Motivation

An ANCOVA revealed that there was a significant difference in the intrinsic motivation of athletes who lost their scholarship compared athletes who did not, after controlling for intrinsic motivation at the beginning of the season and gender, $F(1,76) = 4.18$, $p = .046$, with a small effect size of ($\eta^2_P = .07$). those who lost scholarship had a mean intrinsic motivation score of 4.13 ($sd = .97$), whereas the athletes who kept their scholarships had a mean score of 4.75 ($sd = .79$). Figure 1 shows the two groups' changes in intrinsic motivation.

Amotivation

An ANCOVA revealed that there was no significant difference in the amotivation levels of the athletes who lost their scholarship compared to the athletes who kept theirs, after controlling for time point one amotivation and gender, $F(1,10) = .66$, $p = .419$, with a small effect size of ($\eta^2_p = .01$). Those who lost scholarship had a mean amotivation score of 2.38 ($sd = 1.14$), whereas athletes who kept their scholarships had a mean score of 1.95 ($sd = 1.04$).

Table II
Means and Standard Deviations for the Motivation Subscales.

	T1 Mean (SD)	**T2 Mean (SD)**
Intrinsic Motivation	5.08 (1.12)	5.09 (1.13)
Identified Regulation	5.79 (0.81)	5.67 (0.87)
External Regulation	2.82 (1.37)	2.74 (1.31)
Amotivation	1.94 (0.99)	2.07 (1.07)

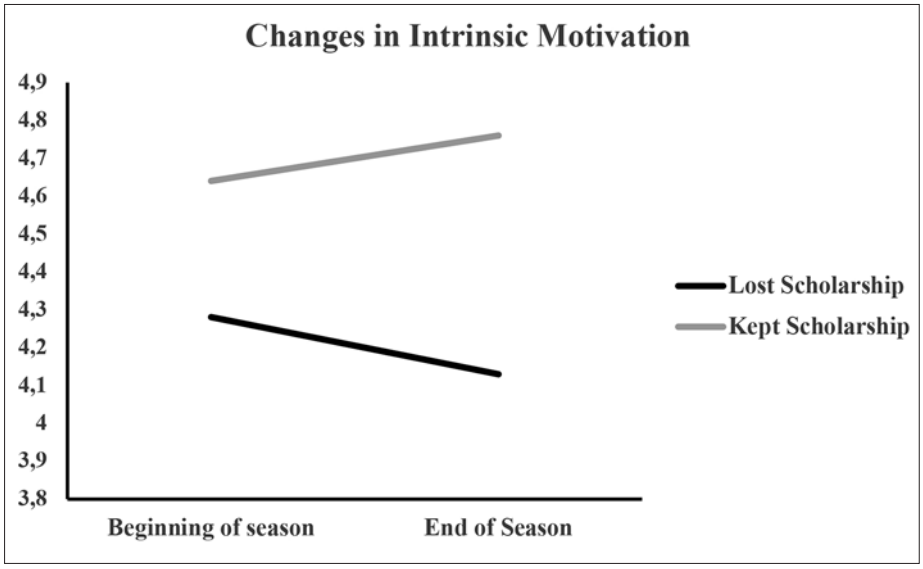

Fig. 1. Graph of Intrinsic Motivation at Each Time Point.

Perceived Effects Of Scholarship Loss

The 17 athletes from University X responded to five open ended questions about the impacts of scholarship removal on various aspects of their lives. There were 66 coded responses to the questions. Four major themes emerged from the survey responses: *change in motivation* (21%), *team culture* (26%), *attitude* (26%), and *external influences* (27%). Figure 2 shows these themes as well as their subthemes and coding frequency.

External influences was the largest theme with 18 occurrences (27%) and included subthemes of *disadvantaged recruiting* (4.5%), *personal financial conflict* (9%), and *school plan* (13%). *School plan* was frequently coded as a subtheme including statements of graduating or staying on track academically (e.g., "Stay because I wanted to retain my degree that I have earned and not lose progress towards my goal"). *Personal financial conflict* meant could no longer stay at the school without a scholarship (e.g., "Not enough money covered by scholarship"), or increased debt after college (e.g., "I am from out-of-state, so it impacts my financial situation heavily. I expect to be in a lot more debt"). Finally, *disadvantaged recruiting* accounted for statements about the future of the program and recruiting (e.g., "recruiting-wise, we scored in bottom two teams this year, the recruits that are coming in are

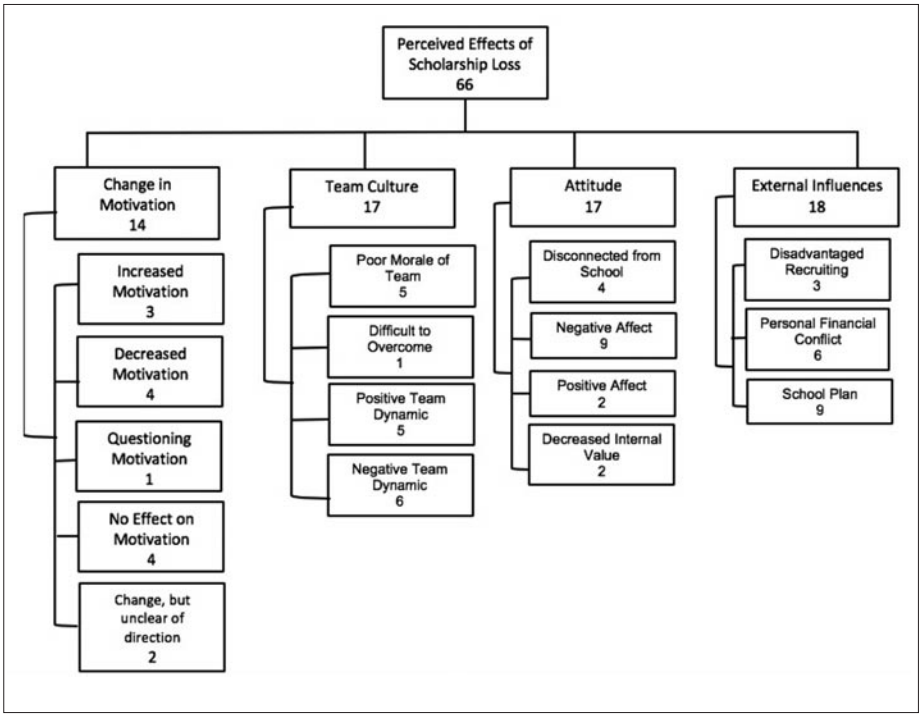

Fig. 2. Themes that Emerged Through Thematic Coding.

not at same level of swimmers leaving. How is that supposed to motivate current swimmers.").

The *team culture* theme (26%) included: *poor morale of team* (7.5%), *difficult to overcome* (1.5%), *positive team dynamic* (7.5%), and *negative team dynamic* (9%). Negative team dynamic was the most frequently coded subtheme and included responses about people leaving (e.g., "there are also a lot of people who left and made the environment feel less positive") as well as a divide within the team (e.g., "I do not feel as though the classes are as close as they have been in the past and I think it has caused a divide among people who are staying and people who are leaving."). Positive team dynamic was reported by 5 respondents which was encouraging (e.g. "I love my teammates and the atmosphere we have at [University X] and I know that no other team would be able to come close to that."). Poor morale of the team was also mentioned 5 times (e.g., "I think it overall lowered the morale of the team a little."). There was one respondent that found the situation difficult

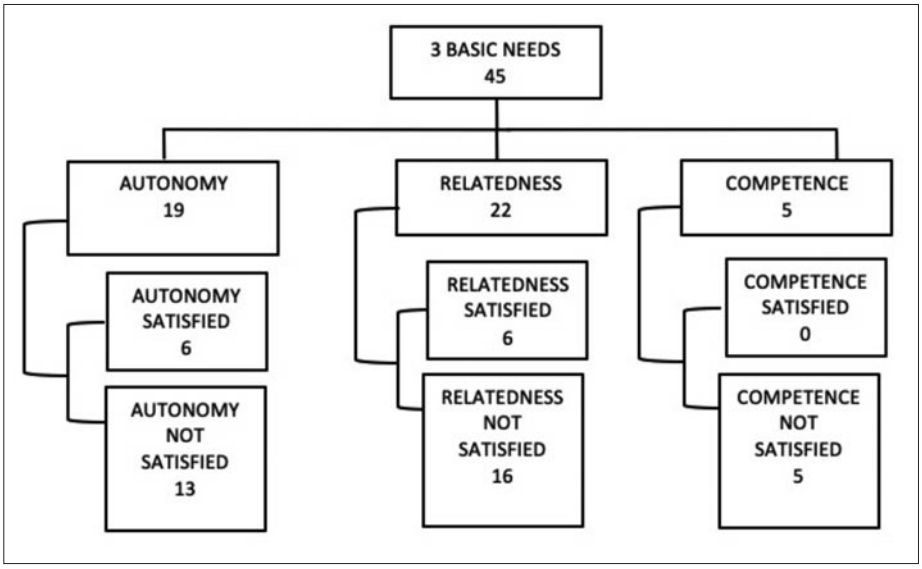

Fig. 3. Themes that Emerged Through Self Determination Theory Coding.

to overcome (e.g., "[impacted the team] Incredibly, it will be hard it overcome it for many of my teammates").

The theme of *attitude* (26%) included subthemes of *disconnected from school* (6%), *negative affect* (14%), *positive affect* (3%), and *decreased internal value* (3%). *Negative affect* was the highest subtheme frequency with 9 responses and included negative emotions about the situation (e.g., "hopeless about the future," "anger," "irrational thinking"). *Disconnected from school* included feelings toward the athletic department and allegiance to the school (e.g., "My motivation to swim as a [school mascot] has went [sic] down"). Positive affect included bright feelings about the future of the program (e.g. "less stressed," "happy to have team"). Two responses indicated a decreased internal value (e.g., "Feel less valued as an athlete").

The final subtheme was *motivation* (21%). The subthemes in motivation included a *decrease in motivation* (6%), an *increase in motivation* (4.5%), *no change in motivation* (6%), *questioning motivation* (1.5%), and *change, but unclear of direction* (3%). Decreased motivation was the most common subtheme. Here athletes explicitly stated a decrease in their motivation (e.g., "Decreased the overall motivation to swim and practice"). With *no change in motivation* the athletes felt they were unaffected by the situation (e.g., "It has not personally affected my motivation") or their motivation was unaffected due to them graduating. An increase in motivation was reported in 3 of the

responses which included statements like (e.g., "It completely ended my drive to swim in the beginning, but I switched my focus and now I've started swimming for myself"). Some athletes were unclear of what direction of change their motivation took regarding the news included responses saying (e.g., "a little" or "a lot"). The one respondent did not know what the impact would be on their future, questioning their motivation (e.g., "I don't see a lot of reasoning behind staying besides liking the sport, but I often wonder if it is worth it").

Once the data was analyzed through thematic coding the researchers coded it a second time in accordance with the three basic needs of self-determination theory: autonomy, competence, and relatedness (Deci & Ryan, 2002). The basic need of autonomy was mentioned in 42.2% of the responses (6 responses indicated autonomy was met and 13 indicated it was not met); the need of autonomy was met when people felt like they were in control of their own behaviors (e.g., "I am now swimming for myself,") or was not met when athletes felt they had no control over their decision to stay or leave at the school (e.g., "funds were gone"). The topic of relatedness came up frequently when the athletes mentioned the team or university. Twenty-two responses indicated some sort of the participants relatedness to the school or their team. Six of the responses mentioned they continued to find relatedness from their teammates (e.g., "we are a team that cares about everyone," "I am just happy to have my team"), while 16 of their responses indicated that they felt that their need for relatedness was frustrated (e.g., "team is divided between those staying and going," "the athletic department doesn't care"). Competence frustration was mentioned in 5 responses (e.g., "decreased my value as an athlete," "I know my worth and my needs would have been better met at different school"). The removal of scholarship also reduced the team's perception of ability to recruit in coming years, further decreasing feelings of competence (e.g. "…the future for our program does not seem like it will ever be able to accomplish more than what we have already accomplished"), making the team feel more hopeless about the current situation.

Discussion

Investigations into scholarship removal and effects of budget cuts are becoming more relevant in light of the economic impact of the recent pandemic. Recently the NCAA announced it will cut 63% of funding of from all Division I schools for the 2020-2021 academic year (National Collegiate Athletic Association, 2020). Division I mid-major schools are anticipated to be

the hardest hit (Schlabach, 2020). This recent cut has forced many universities to cut funding to their non-revenue sports such as swimming. This unfortunately could impact hundreds of student-athletes across the country. It is imperative to take into account the athletes' reactions to this change.

To our knowledge, this is the first study to examine the motivational effect of removal of scholarship as opposed to a hypothesized situation. As previous research on the topic of scholarship and motivation is quite conflicting and weakened by their cross-sectional designs, this study may present findings in a new light. Our findings indicated a significant difference in intrinsic motivation at the end of the season between those who lost compared to those who kept their scholarships when controlling for gender. This was in line with previous research that found that monetary rewards (Cremades et al., 2012), as well as hypothetical scenarios of scholarship loss (Medic et. al., 2007), decrease intrinsic motivation. Adding to previous literature, the present study supported this finding in a real scholarship loss scenario using a control group of athletes across the country who did not lose their scholarships. Further, attending to Standage et al.'s (2019) criticism of the current reliance on cross-sectional studies and need for research using multiple time points in self-determination theory research, this study used the athletes' intrinsic motivation at the beginning of the season as a covariate to better portrait the dynamic nature of motivation.

Regarding amotivation, there was no significant change when comparing amotivation between the two groups (lost versus kept) between times one and two. There is a significant amount of research showing high amotivation in athletes is correlated with high burnout rates (Pietraszuk, 2006; Smith, 1986), so it is assuring to find that losing a scholarship may not be a contributing factor to amotivation. It is important to consider, however, that our sample size had limited power, which increased the chances of type II error. It is possible that abrupt removal of scholarships is not related to amotivation because these athletes were not burned out as a result of their sport, but rather, given the choice to continue it on their own accord (e.g., not for financial need). As evidenced in some of the qualitative results, changes in motivation experienced by athletes who lost their scholarships may be related to what the athlete perceived the scholarship to represent (e.g., support for autonomy, relatedness, or competence).

One possible explanation for the differences in motivation when experiencing scholarship loss is that their motivation is attributable to how they perceive their scholarship. An athlete who perceives their scholarship to be a measure of their competence may experience a decrease in intrinsic motivation if removed (Medic et al., 2007), whereas an athlete whose scholarship allowed them to pay for a college degree may experience increased financial

worry, increasing stress and decreasing intrinsic motivation (Baker, 2004). In contrast, for athletes who have the means to pay for college through their parents or other sources, the scholarship is an added bonus, but not a necessity. These athletes may not feel as stressed about finances and can focus on their love for the sport regardless of monetary reward, resulting in less pressure to perform and an increase in intrinsic motivation (Cremades et al., 2012). Our qualitative data exhibited all of these explanations, with athletes who continued to feel motivated due to their strong ties to the team and university (relatedness) and found meaning in swimming for themselves (autonomy), whereas others felt devalued (decreased competence) and that the change in scholarships affected the team cohesion (relatedness).

For some, scholarship removal could be perceived as "leveling the playing field" within the team. For instance, a non-scholarship athlete may feel of lower competence and relatedness to the team, but removing all scholarships could increase the athlete's relatedness to their team and their personal feelings of value to the coaching staff since all teammates are now financially of equal value to the school, with no athlete being rewarded as better for their skills and abilities (Deci & Ryan, 2002). Future research should further investigate the symbolic aspect of scholarships, what they mean for different athletes, and how coaches and athletic departments can best use scholarships as a healthy motivational tool as opposed to something that creates higher feelings of external control.

It is also important to note that the qualitative analysis depicted the wide impact that removal of scholarships can have on individual athletes. Attitude and team culture emerged as major themes, including positive and negative affect and team dynamic, along with decreased internal value, and being disconnected from the university These findings expand upon our quantitative findings by diving into the reasons why scholarship removal affects a student athlete's basic needs satisfaction, indicating that individual and team perceptions may translate to overall intrinsic motivation. A negative outlook, perceived poor team culture, and decreased internal value were often mentioned and may predict lower motivation.

Practical Implications

Considering the present study's results, it seems like in order to maintain the motivation of the athlete in the event of a scholarship removal, one could promote the satisfaction of the athletes' basic needs. This idea is supported by the qualitative portion of the study, as over three fourths of the responses indicated that one or more of their basic needs were not being met and that

contributed to overall negative attitudes and decrease in their internal desire to swim. The basic needs were not being met and that contributed to overall negative attitudes and decrease in their internal desire to swim The basic needs must be met in order to have an increased amount of intrinsic motivation, which is especially important for athletes competing at a high level (Schneider & Kwan, 2013). In the unfortunate event of scholarship removals, our research indicates that coaches, sport psychology consultants, and athletic departments should attempt to support the team through activities that support the fulfilment of their basic needs, such as team bonding activities aimed to increase relatedness (i.e., team activities outside of the day to day sport, meetings with each team separately) and explain that this situation is not due to their incompetence in the sport. In addition, coaches could stimulate the athletes' feelings of competence through other means, such involving them more on decision-making related to the sport (Claver et al., 2017). The coach can be an important asset and help the athletes rally around each other during this time to increase the athletes' relatedness and hopefully increase their intrinsic motivation (Vansteenkiste, 2018). The athletic department could also work to incorporate a sense of belonging to the athletic department as a whole and allow the students to increase their identification to and support for the university (relatedness). Sport psychology consultants can help promote the athletes' autonomy, relatedness, and competence as well, planning interventions to increase self-efficacy and helping them recognize the importance of the team to the university despite the limited funding. Future studies should evaluate if measures such as these would result in maintenance of the athletes' intrinsic motivation when facing scholarship loss.

Limitations

One important limitation of the present study was the small sample size, which limited the number of analyses that we could run and the power that we could achieve with the sample. Still, it is important to consider the fact that the scenario in the current study is very difficult to intentionally design, because it would be unethical to take away an athlete's scholarship to assess the changes in their motivation. Therefore, although the sample size is a limitation in our study, it would not be possible to increase the sample size in a manner that included participants who lost their scholarship. An additional limitation regarding the sample is that there was an overwhelmingly majority of female participants (71%). As previous research (Cremades et al., 2012) has found, gender is a significant variable in motivation. Even though the

researchers controlled for gender in their analysis, future studies with more male participants should assess if the motivational differences found in the present study would be replicated.

Another limitation is that the study was conducted in an online format rather than an in-person interview, which might have affected the depth and honesty of the responses. The responses could have also been impacted because the researchers knew several of the participants, which could have biased participant answers even though it was an anonymous survey.

Additionally, five respondents indicated that they were graduating and would not be affected by the scholarship situation in the upcoming school year. This may have changed how they perceived the scholarship removal and its impact on the team for the following season.

Finally, although most of the responses were collected before COVID-19 was declared a pandemic, some were collected after University X decided to finish the semester remotely. This may have altered some of the participants' answers, as we did not account for this additional Stressor.

Conclusion

The causal effects of scholarship removal on Division I athletes remain vastly understudied. This preliminary study found a significant difference in intrinsic motivation between the athletes who lost their scholarship and those who did not. The qualitative data also revealed several important motives related to scholarship loss, setting the scene for future research to investigate how the perception of scholarship loss may support or thwart basic psychological needs. As NCAA and universities continue to cut their budgets, particularly for non-revenue sports, the psychological effects of scholarship removal should continue to be studied.

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Manuscrfipt submitted April 2020. Accepted for publication May 2021.