

Article

# Advancing holistic development in college student athletes: Probing prosocial behavior, gratitude, and the satisfaction of basic psychological needs

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**Abstract:** Interconnected components of holistic development, such as being thankful, addressing basic psychological needs, and acting effectively toward others, should be a priority for college athletes. Athletes at the College level need all-encompassing support systems to ensure their health, happiness, and success because of the special difficulties they have juggling their academic, athletic, and personal schedules. Problems with work-life balance, stress, and performance expectations all impede College Student Athletes' holistic development. A thorough plan that considers all of the social, emotional, and psychological aspects impacting athlete development is necessary to overcome these obstacles. An Integrated Holistic Development Program for College Athletes (IHDP-CA) is suggested in this paper as a method that incorporates various aspects of positive psychology, mindfulness, resilience training, and the enhancement of interpersonal skills. Athletes at the College level can benefit from this all-encompassing program's emphasis on helping others, developing an attitude of gratitude, and meeting basic psychological requirements. Sports counseling services, schools, and College athletic teams can all benefit from the IHDP-CA. A more positive and supportive sporting environment can be achieved when the program takes a more holistic approach to athletes' needs, improving their mental health, social connections, and overall performance. The possible effect of the IHDP-CA on the holistic development outcomes of College Student-Athletes will be predicted through simulation analysis. To gain a better understanding of the program's long-term viability, efficacy, and scalability, this analysis will run simulations of different situations and tweak program settings.

**Keywords:** holistic; development; college athletes; probing; prosocial behavior; gratitude; satisfaction; essential; psychological needs

## 1. An Overview

### 1.1. Background

The primary focus of this quantitative study was on the moral reasoning of student-athletes who were attending a university that had a religious affiliation (Barker, M. C. (2023). *The Moral Development of College Student Athletes: A Quantitative Study Exploring the Moral Reasoning of NAIA College Student Athletes and the Perceived Value and Benefit Held Toward the NAIA Champions of Character Initiative*. Johnson University. Additionally, the purpose of this survey was to gain an understanding of the thoughts and feelings of college student-athletes on the Champion of Character programme,

which was initiated by member schools, as well as the perceived value and benefits of the programme (İbanoğlu, E. (2022). *STAYING IN SPORT: BASIC PSYCHOLOGICAL NEEDS OF EARLY-SPECIALIZED ATHLETES AND SPORTS PARENTING* (Master's thesis, Middle East Technical University). Many scholars have contended that the increasing visibility of sports in popular culture over the last several decades can influence how people see the significance of health, morality, and unity in society (Pankow, K., Mosewich, A. D., McHugh, T. L. F., & Holt, N. L. (2022). The role of mental health protection and promotion among flourishing Canadian university sport coaches. *Sport, Exercise, and Performance Psychology*, 11(1), 28. Sports can frequently serve as a means of teaching players vital life lessons. The moral thinking and awareness that people display is a strong indicator of their ethical behavior, according to additional studies in the domains of education and psychology (Graper, S. (2023). #GGNation: A Case Study Exploring Student-Athlete Mental Health at a Canadian University Using Design Thinking (Doctoral dissertation, Université d'Ottawa/University of Ottawa).. This study aims to use a mixed-methods approach to learn how extracurricular giving programmes affect alumni philanthropic habits and actions through time (Phan, M. L. (2023). Evaluating the effects of a teacher-implemented mindfulness-based intervention on teacher stress and student prosocial behavior.. Campuses across the country are seeing a rise in student philanthropy programme, which aim to instill a sense of generosity and community service while generating income for schools (Panlilio, Z. A. (2023). Framing a Sense of Hardship as Unique or Similar and Consequences of Self-Distancing on Affect and Prosocial Behaviors (Doctoral dissertation, State University of New York at Buffalo).. Despite this, there is a dearth of research on the topic, and donors tend to see the advantages mainly in terms of institutional gain, not individual development (Bala Subramanian R, Thakur, M. K., & Patre, S. (2023). Workplace Gratitude: Literature Review and Future Directions. *FIIB Business Review*, 23197145231154039.. College student-athletes encounter complex challenges to holistic development, which is the basis of this research's context. There is a lot of work-life balance issues, stress, and pressure to perform because these people have to juggle a lot of academic responsibilities with intense sports training. The main idea behind the problem statement is that ordinary support systems might not be able to meet the specific requirements of collegiate athletes, which could have a negative impact on their health and performance. To address this, the research proposes the Integrated Holistic Development Programme for College Athletes (IHDP-CA), which incorporates ideas from positive psychology, mindfulness, resilience training, and improving interpersonal skills. The researchers' goal in creating this programme is to create a more positive and supportive athletic atmosphere that is good for athletes' mental health, social connections, and performance by highlighting thankfulness, basic psychological needs, and kind behaviour. Understanding the significance of attending to the holistic needs of collegiate student-athletes beyond only their athletic success is what drives the study, with the ultimate goal of improving their entire development and welfare. The study's overarching goal is to elucidate the IHDP-CA's possible effects on athletes' holistic development outcomes through simulation analysis; this will help us understand its sustainability, effectiveness, and scalability in the course of time.

## **1.2. Motivation**

The purpose of this research is to add to what is already known about the benefits of philanthropy education for students in terms of donor development and future giving (Adigun, O. B. (2020). Building a Line of Inquiry Into Student Psychological Need Frustration and Related School-social Conditions.<sup>0</sup>. Student development and student philanthropy education are the cornerstones of this study, and this chapter will offer an overview of both (Proulx, J. D., Van de Vondervoort, J. W., Hamlin, J. K., Helliwell, J. F., & Aknin, L. B. (2023). Are real-world prosociality programs associated with greater psychological well-being in primary school-aged children?. *International Journal of Environmental Research and Public Health*, 20(5), 4403. Furthermore, it will provide context regarding the prominent student philanthropy initiative as well as the study's research questions, a synopsis of the mixed-methods approach, and the anticipated theoretical and practical research hypotheses (Proulx, J. D., Van de Vondervoort, J. W., Hamlin, J. K., Helliwell, J. F., & Aknin, L. B. (2023). Are real-world prosociality programs associated with greater psychological well-being in primary school-aged children?. *International Journal of Environmental Research and Public Health*, 20(5), 4403. Institutions of higher learning are under intense pressure to diversify their sources of funding in the modern day (Newstead, T., Dawkins, S., Macklin, R., & Martin, A. (2020). The virtues project: An approach to developing good leaders. *Journal of Business Ethics*, 167, 605-622.. In an effort to create long-term revenue, educational institutions around the nation are launching new programme to teach students to give (Barry, E. C. (2022). Evaluation of a Remote Implementation of the Well-Being Promotion Program with Middle School Students during COVID-19. However, there is a lack of study on the most effective ways to foster a culture of giving, which in turn affects both the campus's development initiatives and the giver's prosocial behavior (Gill, M. L. (2023). Teacher-Directed Student Aggression: Principal and Teacher Perceptions in Building Relationships with Students with Emotional Behavioral Disorder. The Challenges, The Implications, and The Outcomes. Bowling Green State University.. A demographic that has particular obstacles in managing personal, athletic, and academic commitments, college student-athletes are the focus of this research, which makes a substantial contribution by addressing their holistic development. The study's goal is to improve athletes' health, social connections, and performance by suggesting the Integrated Holistic Development Programme for College Athletes (IHDP-CA), which places an emphasis on prosocial behavior, thankfulness, and addressing psychological needs. Recognizing the complexity of student-athletes' lives, the programme takes a holistic approach that helps them grow as whole people. The lives of collegiate athletes and the sporting world as a whole may be improved by the findings of this research.

## **1.3. Problem statement**

The purpose of this quantitative study is to evaluate whether or whether moral development education programmes may have an effect on the moral reasoning skills of college athletes, as well as to determine the extent to which such programmes could have such an effect (Woodson, M. J. (2022). Former College Athletes and Their Persistence in Medical School: A Phenomenological Study.. We used the term "moral reasoning" to describe a learned mental process that, when faced with a morally weighty decision, considers not only one's own experiences those of influential people in one's life, such

as parents, peers, teachers, and clergy (Foster, J. (2023). *Impact of Prosocial Education Professional Development on Teachers' Self-Efficacy, Stress, and Burnout* (Doctoral dissertation, University of Missouri-Columbia).. “Moral reasoning” is the mental operation by which people determine the relative merits of several options and ultimately choose on a course of action. Ethics is thinking about what’s right and wrong and how your actions could affect other people. People should additionally consider the opinions and experiences of people you trust, like family, friends, and professors. To arrive at a conclusion or plan of action in the face of moral issues, one must be able to think critically and reflectively about them, considering various elements and viewpoints. It places more emphasis on comprehending and analysing ethical concerns than on merely adhering to rules or conventions. College athletes can greatly benefit their mental health and well-being by practicing mindfulness meditation (Rongen, F., McKenna, J., Cogley, S., & Till, K. (2021). *Do youth soccer academies provide developmental experiences that prepare players for life beyond soccer? A retrospective account in the United Kingdom*. *Sport, Exercise, and Performance Psychology*, 10(3), 359.. Mindfulness has several beneficial effects, such as lowering stress levels, increasing performance, sharpening attention, gaining insights, and encouraging better dietary and sleeping habits (Lee, J. M. (2023). *Influence of Athletic Participation on At-Risk Students: A Phenomenological Study*.. Academics, athletic pressure, peer connections, and personal development all add up to a high level of stress for college student-athletes, making them a crucial demographic to target (Stokes III, S. C. (2022). *How To Increase Alumni Giving In The HBCU Environment* (Doctoral dissertation, Northeastern University)..

For this reason, meditation is an effective complementary health strategy. College athletes can learn to cope with stress by practicing mindfulness meditation (Kochanek, J. (2021). *Dialogue in Athletics: A Program Evaluation of a Social Justice Education Initiative in Sports*. Michigan State University.. Because kids are in a formative developmental stage, they require you to listen to their concerns (Garaigordobil, M., Berruenco, L., & Celume, M. P. (2022). *Developing children’s creativity and social-emotional competencies through play: Summary of twenty years of findings of the evidence-based interventions “game program”*. *Journal of Intelligence*, 10(4), 77.. Researchers and administrators in college sports departments continue to devote significant time and energy to studying student-athletes’ holistic development, which includes their intellectual, psychological, physical, and social aspects (Kruglanski, A. W., Szumowska, E., Kopetz, C. H., Vallerand, R. J., & Pierro, A. (2021). *On the psychology of extremism: How motivational imbalance breeds intemperance*. *Psychological Review*, 128(2), 264.. However, there is no assurance that College Student Athletes will develop in a healthy way. Both theoretical and practical considerations point to the fact that athletic department leadership and staff need to work together to provide adequate funding for this kind of growth. Support from friends and family, often called a feeling of community, is a major component in an athlete’s capacity to remain involved in a sport. When it comes to keeping and satisfying athletes, nothing is more important than how they feel about the availability of personalized support. Assimilation into healthy communities is a pressing necessity and an obvious advantage for all students, including College Student Athletes, on college campuses.

Students’ academic performance, campus involvement, and general well-being are all positively impacted by a strong sense of community. Many college campuses

fail to foster a feeling of community, despite the fact that social well-being is vital; as a result, reported instances of loneliness are increasingly being recognized as a public health issue.

The paper's major research hypotheses are as follows:

- We propose an Integrated Holistic Development Programme for College Student Athletes (IHDP-CA) that combines elements of positive psychology, mindfulness, resilience training, and communication skill improvement.
- The comprehensive program's focus on satisfying basic psychological needs, cultivating an attitude and helping others can assist College Student Athletes. When the programme prioritizes the well-being of athletes as a whole, enhancing their social connections, mental health, and overall performance, it can create a more positive and supportive athletic environment.
- Through the use of simulations and adjustments to programme settings, this research aims to enhance our comprehension of the program's scalability, effectiveness, and long-term feasibility.

An outline of the paper is presented as follows: To begin, the section 1 contains an introduction that is presented. A literature review is presented in Section 2. In the section 3, the approach is outlined. The results, analysis, and comments pertaining to the simulation can be found in section 4. A conclusion is presented in the 5th section.

## **2. Literature review**

They aimed to determine whether or not the institution could be better served by cultivating a culture of giving through increasing involvement in extracurricular student philanthropy programme (ECSPP) and other types of student engagement. This was stated in the description of the study that was provided by Alonso and colleagues (Alonso, F. J. (2022). *Education for Citizenship: A Study of the Effects of Cocurricular Student Philanthropy Education on Prosocial Behavior* (Doctoral dissertation, Antioch University).. This dissertation synthesis's the review's findings, which all point to the same thing: that student engagement and extracurricular student philanthropy education raises students' knowledge of, and motivation for, philanthropy and prosocial behavior, and that it encourages students to become involved in their communities and give back to those in need. The research found that the best way to foster a giving culture was for students to become involved and learn about philanthropy outside of the classroom. Consequently, this study's findings support the idea that colleges and universities should think about including co-curricular student philanthropy instruction into their curricula as a way to foster a commitment to giving back to the community.

The effects of four sessions of mindfulness meditation (MM) on college track and field players' stress levels, concentration, performance, and sense of present were investigated in a study by Braatz Braatz, L. R. (2021). *Promoting Wellness for College Athletes Through Mindfulness Meditation*.. At its core, the project followed the holistic methodology advocated by nursing theorist Jean Watson in her theory of healing. Nearly every College athlete reported experiencing academic stress, and many expressed an interest in practicing mindfulness meditation. Although, due to external factors, the average level of stress rose from the first to the last session, the majority

of College Student Athletes still think the programme is worth recommending. This research has the potential to inform nurse practitioner practice by enhancing the mental health and fostering more positive coping mechanisms among College Student Athletes in times of stress, thereby reducing the need for medication and associated medical expenses.

In higher education, the physical endurance-based service-learning (PEB-SL) programme that Rossi, G. E. (2023). *Cycling for Service: understanding how service-learning combined with endurance-based activities enhances prosocial behavior amongst young adults* (Doctoral dissertation, Rutgers The State University of New Jersey, Graduate School-Newark).. created might influence the altruistic actions of pupils, either increasing them or decreasing them. The goal of this research is to find out if service-learning and EBA (endurance-based activities) work together to make people more generous, especially in the context of youth college-aged individuals. Academic education with a fitness/endurance challenge and a component of volunteering or donating is defined here as PEB-SL. PEB-SL connects the dots between the beneficial impacts of exercise and those of volunteering and giving. By analyzing three groups that encourage charitable giving and volunteerism via the organization of cross-country bike rides, the advantages of PEB-SL are explored in this qualitative case study.

The research conducted by Howells, K., & Fitzallen, N. (2020). *Enhancement of gratitude in the context of elite athletes: outcomes and challenges*. *Qualitative Research in Sport, Exercise and Health*, 12(5), 781-798.. utilized an interpretative/ constructionist approach (I/CA) to investigate the gratitude practices, outcomes, and problems faced by ten elite athletes from Australia, including both Olympians and Paralympians. These athletes had taken part in a gratitude workshop. This group participated in a variety of sports, including cycling, sailing, diving, beach volleyball, and track and field. Data was gathered through semi-structured interviews and analyses using content analysis. As a result of practicing with the top athletes, they began to show more genuine appreciation to those around them. Improvements in attitude, attentiveness, stress management skills, self-assurance in expressing gratitude, and performance were some of manner of expressing gratitude is correlated with favorable results. This paper covered in the research are the difficulties that people feel when trying to express gratitude in this setting.

Here use the Sport Development Framework (SDF)—and more especially the retention stage—as a prism through which to see the maturation of elite athletes, the authors Berg et al. (2021). conducted an empirical investigation into the ways in which university sports departments' administrations and employees foster inclusive and welcoming campus environments. Twenty-four athletic administrators from ten different universities participated in semi-structured interviews. We found that the most important things to do to help College Student Athletes succeed were to come to terms with one another to intentionally support them, to re prioritize their well-being, and to adapt to their needs. Several actionable suggestions were made in light of the findings, with an emphasis on the organizational culture and human resource utilization in sports departments. This study emphasizes the significance of social well-being in promoting holistic athlete development, which is necessary for today's elite athletes.

The numerous social, emotional, and psychological factors influencing athlete development must be considered in order to overcome these challenges. Existing methods that do this include ECSPP, MM, PEB-SL, I/CA, and SDF. Hence This research proposes an Integrated Holistic Development Programme for College Student Athletes (IHDP-CA) that combines elements of positive psychology, mindfulness, resilience training, and improvements in interpersonal skills.

### 3. An integrated holistic development programme for college student athletes (IHDP-CA)

Using both qualitative and quantitative techniques, the research methodology is a combination of methods. College student-athletes from a wide variety of sports programmes at different schools made up the sample population. Ensuring representation across all sports and demographics has been accomplished through the utilisation of a purposeful sampling technique. The present research examined the effects of an intervention called the Integrated Holistic Development Programme for College Athletes (IHDP-CA) on the holistic development outcomes of student-athletes. People used statistical methods to examine the quantitative data and thematic analysis to make sense of the qualitative data that gathered via interviews, questionnaires, and direct observation. Examining the IHDP-CA’s potential to improve athletes’ psychological well-being, social networks, and performance as a whole is the primary goal of this research.

The exponential growth of sports coverage in the media over the last several decades has led some scholars to suggest that sports have the power to influence how people think about fitness, their own values, and societal standards. Sports can frequently serve as a means of teaching players vital life lessons. The moral thinking and awareness that people display is a strong indicator of their ethical behavior, according to additional studies in the domains of education and psychology.

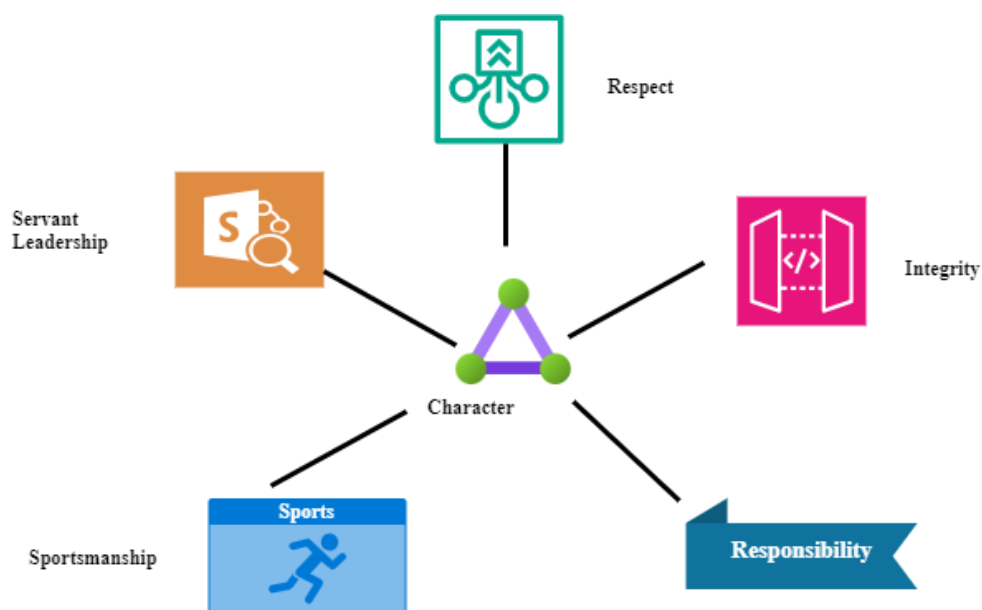
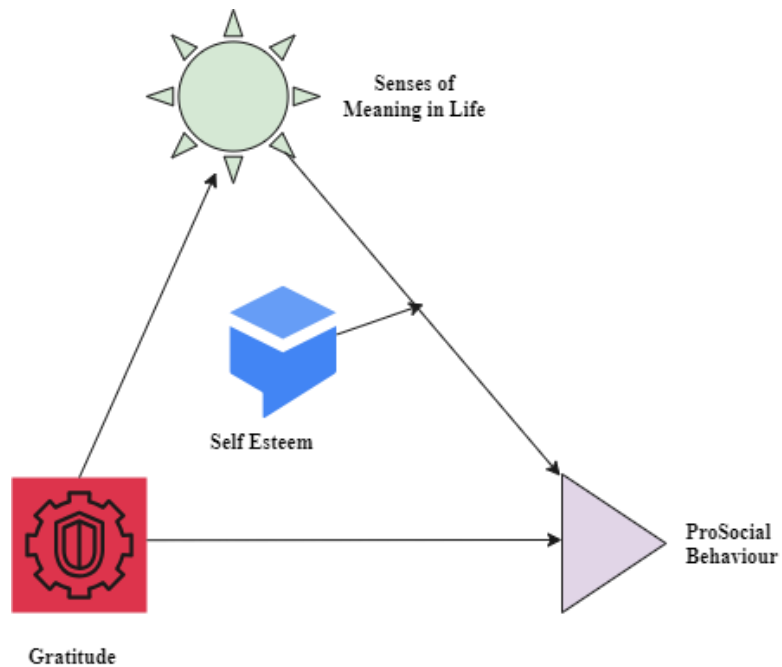


Figure 1. Principles of character.

The above **Figure 1** depicts the principles of character as shown. In this study, athletes attending a religiously affiliated university were the main focus. A programme that aims to teach athletes, coaches, and athletic administrators the values of sportsmanship, respect, responsibility, integrity, and servant leadership to foster character development among athletes and encourage good sportsmanship on the field.

### Prosocial behavior

In social communication contexts, prosocial behavior is defined as actions taken with the intention of helping other people. Adolescents' prosocial behavior serves as a measure of their moral growth and a sign of their growing social competence. When it comes to a person's emotional and social growth, it's crucial. Character and behavioral development are at their most formative during adolescence. Investigating the elements that influence the prosocial behavior of adolescents is highly important for their healthy development.



**Figure 2.** The model for research hypotheses.

This study built a model **Figure 2** to investigate how the research mediates and modifies the relationship between prosocial behavior and other variables, with the goal of enhancing teenagers' prosocial behavior and fostering their healthy development. Three possible explanations were proposed: (1) a sense of positively predicts teenagers' prosocial behavior; (2) a sense of purpose in life mediates the relationship between thankfulness and prosocial behavior; (3) self-esteem moderates the relationship in the second half of the mediating path. In the second part of the mediating path, self-esteem acts as a moderator.

If one's self-esteem is high, their capacity to self-regulate will be enhanced, as proposed by the buffer theory of self-esteem. To a person's psychological well-being, self-esteem pertains because it is a part of their self-concept. With a healthy dose of self-confidence, humans can weather any storm that threatens their value as human



beings. A person’s intrinsic prosocial behavior can be boosted by practicing thankfulness, as stated in the theory of moral emotion. Furthermore, it has a reinforcing impact, meaning that when people show appreciation, it encourages the giver to continue doing good deeds. People are more inclined to act altruistically towards the giver or others in the future if they express gratitude after receiving assistance. The receiver of a benefactor’s assistance or concern conveys his appreciation while simultaneously coming to terms with the notion that additional individual and collective efforts are required to make the world a better place. Thus, those with a greater propensity for expression are more prone to do acts of compassion.

Expressing gratitude is a powerful tool for achieving inner peace and tranquilly, both in personal relationships and in the afterlife. When people are appreciative, they are more inclined to help the person who benefited them, regardless of whether it’s the donor or an unknown individual. This finding suggests that a strong sense of appreciation makes it simpler to help others. The subjects tended to help the benefactor and others, according to an experiment that stimulated their attitude of appreciation. A heart full of gratitude is more likely to reach out to people in need, according to studies. Due to these, we were able to come up with our first theory.

$$ReSt.In_{mod} = \frac{J_H}{C_T} \tag{1}$$

In Equation (1) implies  $ReSt.In_{mod}$  which is the readiness defined using reactive strength Index modified which is the ratio of  $J_H$  to  $C_T$  which is jump height and contact time.

$$WR = (P - CS) \times t \tag{2}$$

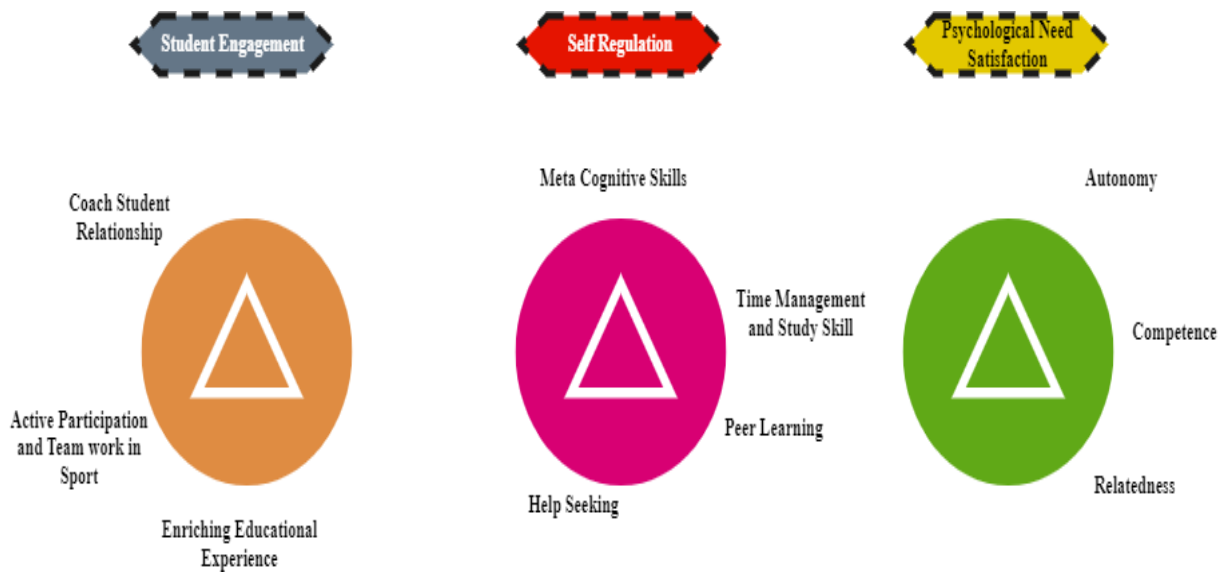
In the above Equation (2) denotes the work rate represented by  $WR$  which is the combination of power  $P$ , critical speed denoted by  $CS$  and time  $t$ .



**Figure 3.** A holistic approach assisting scholar-athletes.

The above **Figure 3** shows the holistic approach assisting scholar athletes as above. There is no college campus without a distinct demographic of student-athletes.

Different from other college students, this group had specific considerations while deciding where to enroll. Whatever the case may be, colleges and universities have a responsibility to provide degree programme to the students they accept. Different categories like Student athlete development, sports psychologist, mental health counselor, academic counsellor, strength and conditioning coach, athletic trainer, multiple coaches and sports scientist. This chapter’s goals are to provide background on potential difficulties faced by student-athletes, attention to institutional practices that help student-athletes succeed, and to suggest ways in which instructors of student-athletes can collaborate with their acadrt staff.



**Figure 4.** The factors influencing student involvement.

The factors influencing student Involvement is depicted as shown in **Figure 4**. Students’ learning and growth in sports education are thought to be impacted by three psychological processes: student engagement, self-regulation, and psychological need satisfaction. A student’s level of engagement was defined as their level of participation in physical education classes. Numerous studies found positive associations between students’ athletic participation and a variety of beneficial outcomes, such as self-satisfaction, involvement in extracurricular activities, and performance in the classroom. Many studies on academic self-regulation have looked at how factors including environment, motivation, and cognition interact with one another. To attain their educational goals, students must be able to self-regulate by setting objectives, tracking their progress, and making adjustments as needed. Evidence from research indicates that PE and athletics play a crucial role in promoting and sustaining health and wellness by making self-regulatory processes easier to implement. Behavioral and health outcomes can be better understood with the help of basic psychological needs theory (BPNT). Humans need autonomy (the ability to do things according to one’s own will and achieve one’s own goals), relatedness (the feeling of belonging to a group), and competence (the belief in one’s own abilities to successfully complete tasks that are optimally challenging) as basic psychological needs. Results in physical education and athletics have been shown to be more adaptable when these three psychological demands are met.

$$B = SE + SR + PN\_S \tag{3}$$

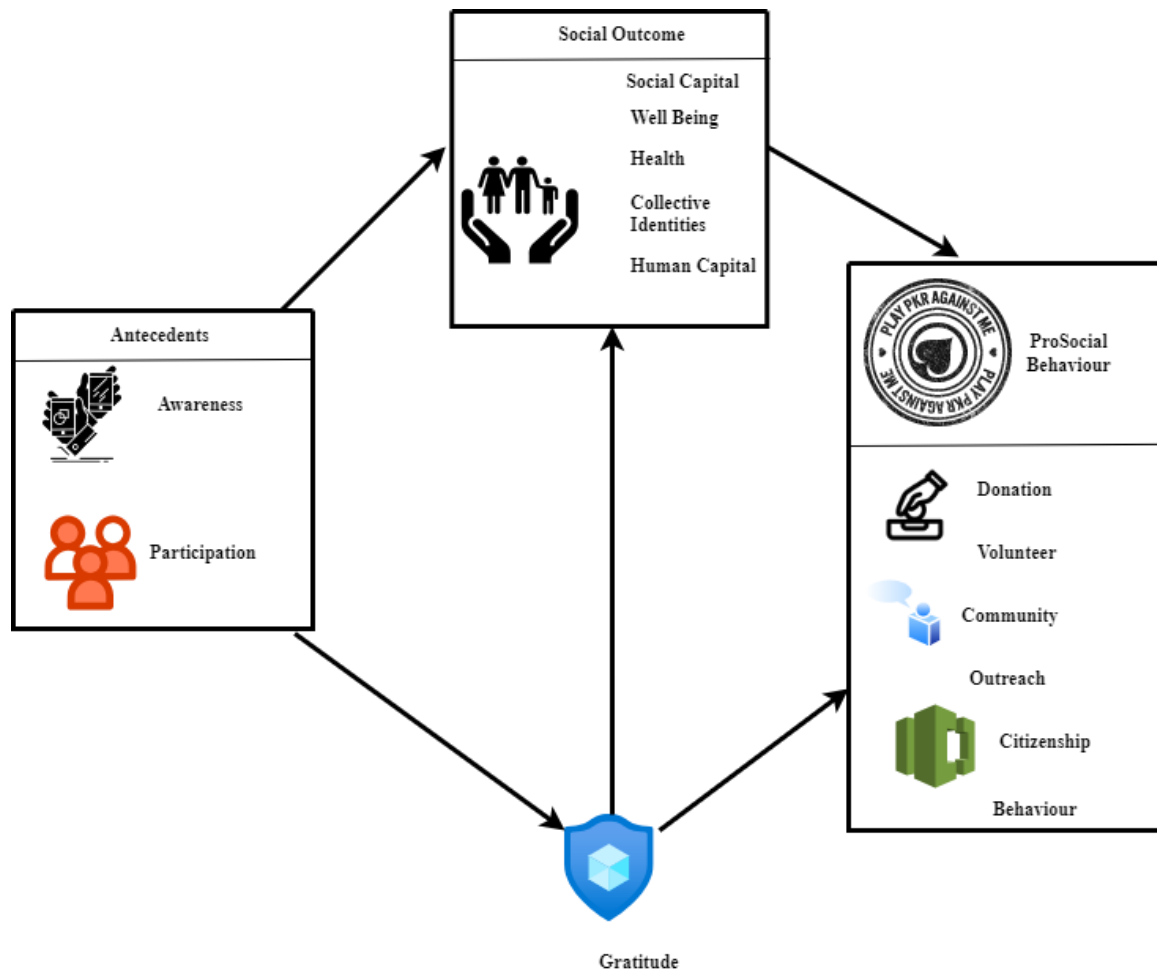
The above Equation (3) represents the B which is the behavioral activity which is the sum of SE student engagement, SR be the self regulation and PN\_S be the psychological needs for satisfaction.

$$T = \alpha \times \exp(-\beta) \tag{4}$$

where T is the time taken for an athlete to completed one sports activity,  $\alpha$  is the constant used for the particular sport event,  $\beta$  is the ratio of change in sports activity especially in athlete field as per shown in Equation (4).

$$OF = A1 \times B + A2 \times B \tag{5}$$

Equation (5) shows the OF represents the objective function where A1 be the athlete 1 and A2 be the athlete 2 where B be the behavioral description of each athlete.



**Figure 5.** Conceptual paradigm of sport-based social initiatives.

As shown in Figure 5. Participating in social sponsorship programmed that focus on sports allows people to get access to both material and immaterial rewards provided by other groups and individuals. Gratitude, which is “a sense of gratitude and joy in reaction to receiving a gift, whether or not the gift become an actual benefit from a particular other or an experience of quiet bliss stirred by natural beauty,” could be a

key concept to impact the social outcomes for those involved in or benefited by sport-based social initiatives, considering these characteristics. In reality, numerous running groups provide a number of reasons to be grateful for running.

$$S_{oc} = S_c + WB + H + CI + H_c \tag{6}$$

Equation (6) indicates the social outcome  $S_{oc}$  which is the addition of  $S_c$  which is the social capital,  $WB$  is the well-being,  $H$  be the health of the particular athlete,  $CI$  be the collective identity and  $H_c$  be the human capital.

$$PS_B = S_{oc} \times \frac{D \times V \times C \times O}{CS + B} \tag{7}$$

Equation (7) denotes the prosocial behavior  $PS_B$ ,  $S_{oc}$  be the social outcome,  $D$  is the donation,  $V$  is the volunteer,  $C$  is the community,  $O$  be the outreach to the  $CS$  be the citizenship and  $B$  is the behaviour.

$$PS_B = (S_c + WB + H + CI + H_c) \times \frac{D \times V \times C \times O}{CS + B} \tag{8}$$

Equation (8) is obtained by solving Equation (7) in Equation (8).

**Table 1.** Effects of self-esteem as a moderator and of a feeling of purpose in life as a mediator.

Variable	Mean	Standard deviation
Sex	0.54	0.45
Age	13.78	1.66
Gratitude	92.45	12.76
Sense of meaning in life	51.43	10.45
Self esteem	28.34	4.78
Prosocial behavior	97.34	16.78

The above **Table 1** indicates the effect of self-esteem as a moderator and of a feeling of purpose in life as a mediator showing mean and standard deviation respectively.

**Table 2.** Comparison analysis.

No. of Samples	ECSP	MM	PEB-SL	I/CA	SDF	IHDP-CA
10	25.3	48.33	35.14	37.56	32.76	50.22
20	25.21	49.45	41.24	30.6	43.65	52.01
30	36.36	50.15	34.19	50.99	54.11	59.1
40	40.21	52.47	35.76	52.62	71.65	61.43
50	42.56	56.33	59.33	59.34	72.98	64.34
60	43.98	47.14	26.54	60.98	47.26	68.44
70	51.54	21.89	67.39	66.41	63.61	77.65
80	67.22	65.25	75.25	69.89	57.98	88.98
90	72.36	84.66	76.15	84.57	79.1	98.2

**Table 2** indicates the comparison analysis of different existing methods such as ECSPP, MM, PEB-SL, I/CA, SDF and IHDP-CA. In this the proposed method shows the better value compared to the existing methods.

The IHDP-CA can be useful for school counseling programs, College sports teams, and sports in general. By meeting athletes' needs in a more holistic way, we can create an athletic community that is better for their mental health, social ties, and performance as a whole. To overcome these obstacles, it is necessary to examine the myriads of social, emotional, and psychological aspects impacting the growth of athletes. Included in the existing ways that accomplish this are ECSPP, MM, PEB-SL, I/CA, and SDF. Hence Based on the findings, the authors suggest an IHDP-CA for College Student Athletes that incorporates strategies from positive psychology, mindfulness, resilience training, and enhanced social skills.

## **4. Results and discussion**

This study set out to examine how a program meant to help professional athletes cultivate an attitude of gratitude fared. The study's findings demonstrated that sportsmen viewed gratitude—defined as an attitude of active generosity and the antithesis of resentment—as extremely pertinent to both their career and personal life. Participants in the session had the chance to learn about many aspects of thankfulness that improve their emotional and relational health. Because of this, some people's performance improved. The athlete-coach relationship was shown to have improved communication, which led to a shift in perspective, better handling of stress, and enhanced teamwork. According to these findings, key sports-related characteristics are directly correlated with an increase in thanks. The study's results and the purportedly positive effects on health and social competence may make this seem insignificant. While retiring from athletics, elite athletes may reap the benefits of outcomes-based assistance.

### **4.1. Scalability mean analysis**

**Figure 6** shows the scalability analysis of the IHDP-CA where the x axis shows the wide range of variables such as sex, age, gratitude, sense of meaning life, self-esteem and prosocial behavior and y axis shows the mean ratio of the same. The proposed model IHDP-CA suggest the best mean. The gratitude takes the highest point when comparing to each of the other variables.

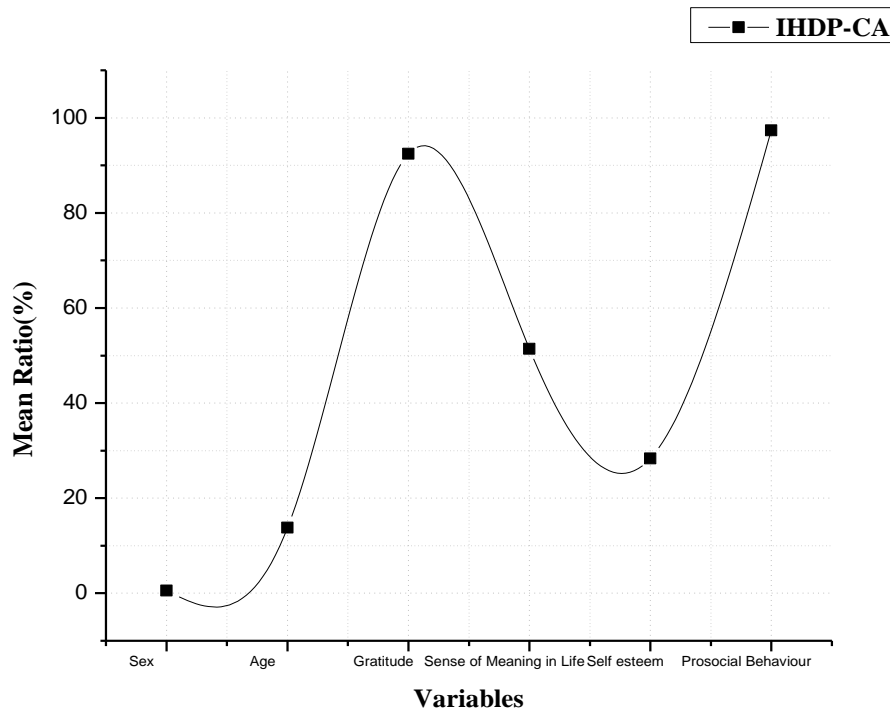


Figure 6. Scalability mean analysis.

#### 4.2. Standard deviation

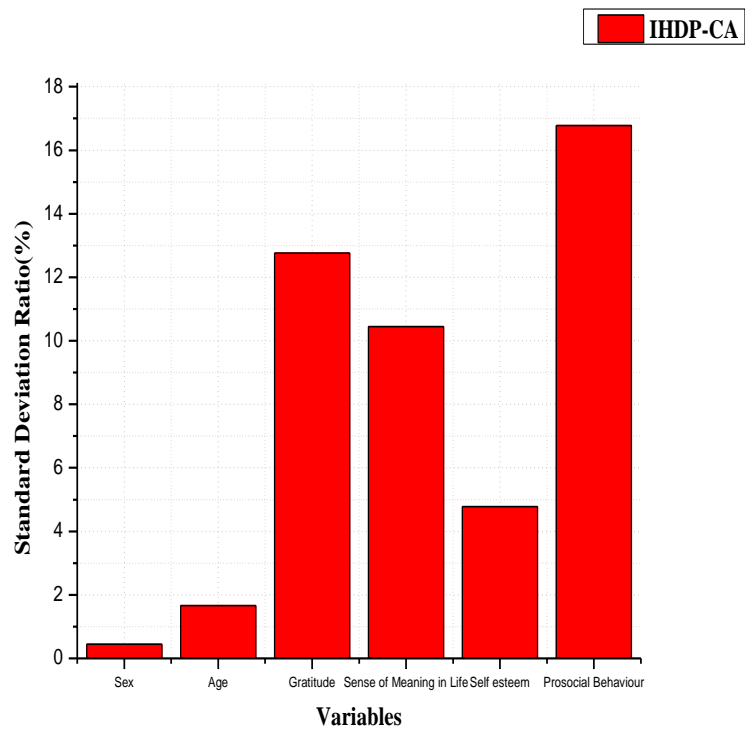
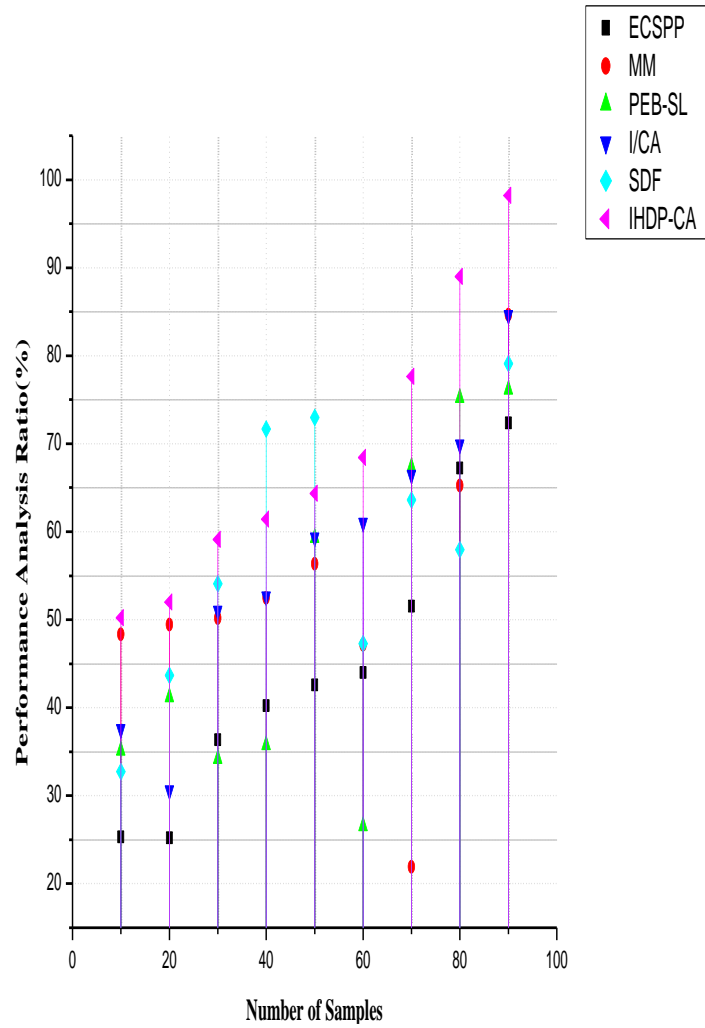


Figure 7. Standard deviation analysis.

In **Figure 7**, we can see the results of the IHDP-standard CA's deviation analysis. The x-axis displays the different variables, including age, sex, thankfulness, life meaning, self-esteem, and prosocial behavior, while the y-axis indicates the ratio of the same. The optimal SD is suggested by the suggested model, IHDP-CA. Among all the factors, gratitude stands head and shoulders above the others.

### 4.3. Performance analysis



**Figure 8.** Performance analysis.

**Figure 8** displays the outcomes of the performance analysis conducted by the IHDP-CA. Both the number of samples (on the x-axis) and the results of the performance analysis (on the y-axis) are shown. The IHDP-CA is recommended, and it is one of the best models out there.

### 4.4. Efficiency analysis

**Figure 9** shows the results of the IHDP-CA's efficiency analysis. On one side, we can see the total number of samples; on the other, we can see the efficiency analysis results. One of the greatest models available, the IHDP-CA comes highly recommended. Number of samples taken on x axis and efficiency is taken on y axis.

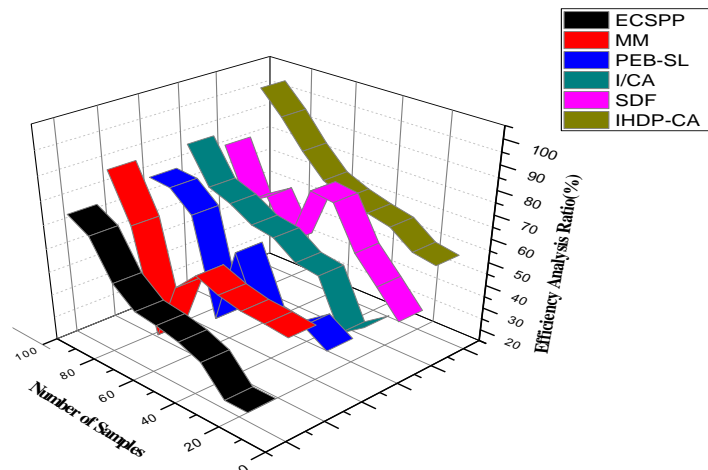


Figure 9. Efficiency analysis.

#### 4.5. Long term analysis

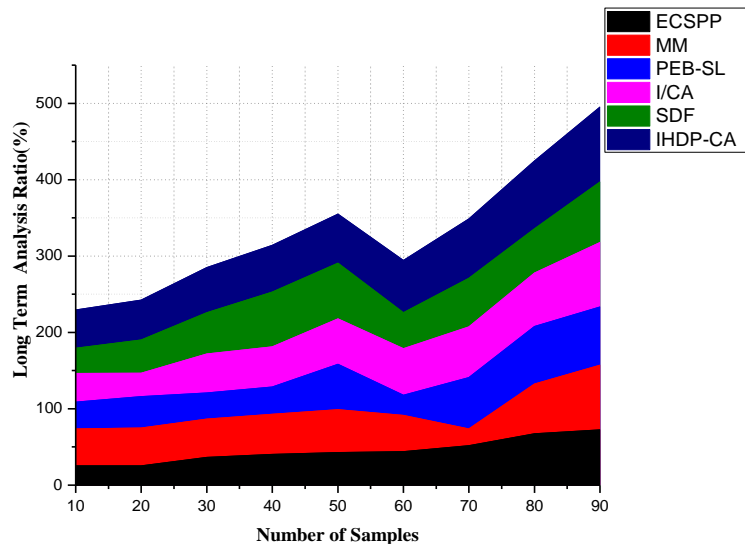


Figure 10. Long term analysis.

Presented in **Figure 10** are the findings from the IHDP-CA’s long-term investigation. We may observe the overall sample size on the one hand, and the outcomes of the long-term analysis on the other. The IHDP-CA is one of the best models out there and is strongly recommended.

Many other types of sports, including College teams, school counseling programs, and sports overall, can benefit from using the IHDP-CA. By meeting athletes’ needs in a more holistic way, we can create an athletic community that is better for their mental health, social ties, and performance as a whole. If we want to help athletes overcome these challenges, we need to look at the many different social, emotional, and elements that impact their maturation from a psychological perspective. Presently, tools like ECSPP, MM, PEB-SL, I/CA, and SDF are accessible for this purpose.

Hence the authors propose an IHDP-CA for college athletes based on the results that draws on positive psychology, mindfulness, resilience training, and improved social skills.



## 5. Conclusion

Consequently, one of the primary aims of this research was to examine the challenges that participants had when attempting to practice thankfulness in a highly competitive environment like professional athletics. Some of the difficulties these athletes had were wondering how to show appreciation in settings where winning has always been the ultimate goal. After implementing the lessons, they had learned about thankfulness in the clinic, the athletes noticed an uptick in their disposition, confidence, and capacity to express gratitude to others. Concerns about social welfare, mental health, and player retention are not fleeting trends in college athletics. More empirical research and the combined efforts of specialists from other fields are needed to tackle the complicated topic of athlete well-being

Recent research on elite athletic culture has shown the detrimental effects of an unhealthy obsession with performance outcomes on the physical and mental health of these athletes, these worries are not unfounded. According to studies conducted in these areas, top athletes run the danger of putting performance metrics ahead of the importance of having strong social connections and good relationships. College players and athletic directors tend to have similar views rather than drastically different ones. Given the widespread agreement between the two groups, it appears that there is room for improvement in the areas of social support and retention for College Student Athletes. At multiple points, sports administrators emphasized the significance of genuine interactions with players, seeing each person as more than a player, and staff members fulfilling their roles to intentionally cultivate and retain players. College athletes rated these qualities as very important for a number of reasons, including building trust and openness, showing that each athlete is valuable, encouraging more people to take part in and benefit from intentional programming, and making it easier for players and coaches to have casual conversations. In this study, we propose an Integrated Holistic Development Program for College Student Athletes (IHDP-CA) that combines approaches from positive psychology, mindfulness, resilience training, and the improvement of interpersonal skills. This comprehensive program can aid College Student Athletes in many ways, including satisfying basic psychological needs, cultivating an attitude of thankfulness, and helping others. Administrators in this study stated that the sudden appearance of these topics helped them identify which athletic departments or teams could handle the changes and maintain the supportive environment that both the administrators and the athletes wanted. This was based on their assessment of the staffing, structure, and culture of those organizations. This work opens up new avenues for investigation. Assessing the intangible moments or advantages of a socially friendly culture is one way that academics may help athletic departments and other sports organizations. Results like wins and losses, income, average GPA, and graduation rates are commonly used and easily understood by administrators as indicators of organizational effectiveness, according to the data.

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draft preparation, HL; writing—review and editing, MISBAA; visualization, ABY; supervision, MISBAA; project administration, MISBAA; funding acquisition, ABY. All authors have read and agreed to the published version of the manuscript.

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