

Student-Athlete Pre-Medical Mentorship: A Review of Best Mentorship Practices and the Implementation of a Peer Pre-Med Mentorship Program at the University of New Mexico

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Abstract

Would student-athletes planning to attend medical school benefit from directed mentoring? If so, how should that mentoring effort be organized? This three-pronged research project investigates these questions. Anecdotally, it has been observed that pre-medical (pre-med) student-athletes at the University of New Mexico (UNM) enter late into the process of getting into medical school; they have difficulty with class selection, they do not take advantage of networking opportunities, and they often miss out on clinical and research experiences. In response to this problem, a peer-led mentorship program for UNM student-athletes interested in careers in healthcare has been piloted. This new program is dedicated to identifying and utilizing best practices. As a result, this study will have immediate implications. Using information the researchers gathered from a literature search and a survey of UNM faculty and student-athletes, along with experiences from the pilot group, this review discusses the best mentorship practices for pre-med student-athletes at the University of New Mexico. The study of previous literature evaluates scholarship on mentorship and identifies the key characteristics of good mentors. Additionally, interviews with UNM faculty and student-athletes on mentorship experiences augment the literature review. The surveying process focused on the self-identified needs and desires of pre-med student-athletes. The pilot group assisted in crafting a mentorship program tailored to UNM student-athletes. The subject research can be applied to group meetings and can be used to gauge which mentorship practices are most effective in practice and which are most helpful to group members. Data was collected from the pilot group with the goal of establishing a permanent mentoring program that will help student-athletes reach their medical school aspirations.

Keywords: Peer-mentorship, Student-Athlete, Medical School

1. Introduction

1.1 Successful vs. Unsuccessful Peer-Mentorship Strategies

The researchers analyzed available research on peer mentorship in order to define the characteristics that create a successful or unsuccessful peer mentorship relationship. The researchers evaluated articles on pre-med and student-athlete peer mentorship. There was considerable overlap between successful strategies in pre-med and student-athlete peer mentorship. By integrating ideas found in both of these literatures, the researchers assessed what makes a successful peer mentorship relationship. The researchers hypothesized that pre-med student-athletes would benefit from a peer mentorship program that facilitates open communication and personal connection through a combination of well-organized group meetings and flexible one on one individual mentoring.

One article, “Research mentoring and scientist identity,” mentions three distinct mentorship styles prevalent for undergraduates; the authors describe the instrumental, socioemotional, and negative mentorship models and their relationship to college student identification in the STEM fields.¹ Instrumental mentoring is task-focused and provides the mentee with skills and resources for success. Socioemotional mentoring provides the mentee with social and emotional support in the form of encouragement and motivational communication. Negative mentoring engages in practices that undermine the mentoring bond through pressuring the mentee to complete tasks and not forming a good relationship with the mentee.¹ Because these three mentorship models relate so directly to a pre-medical student (one that usually declares a major within STEM fields), the prevalence of each of these three models will be gauged within UNM’s coach and student-athlete population.

1.2 Unsuccessful Strategies

Prior studies suggest that poor organization, lack of time and experience, and personality differences cause unsuccessful mentoring relationships. If the mentorship group is not organized well, there can be confusion as to group expectations. Mentees may be unclear of the goals of the mentorship group and benefits they could receive.² This is problematic because poor group organization means that the mentee may not be able to benefit from all of the experience of the mentor.³

Poor communication may also be a problem affecting mentor-mentee relationships.⁴ It is difficult for both parties to grow if they do not engage in frequent and fluid conversation. Another issue that is problematic to mentorship groups is a lack of time and experience.

A lack of time dedication from either the mentor or mentee means that interactions between the two are limited. It may make one party feel less valued if there is a difference in expectation as to the actual frequency of meetings; both the mentor and mentee do not benefit as much from the relationship if meetings are infrequent. A lack of commitment introduces strain into the relationship because deprioritizing the mentorship group means that neither person benefits as much from the relationship. A lack of commitment can be frustrating to one party if they expect more from the other person. If a mentor lacks experience, it may be difficult for him or her to know how to interact with the mentee and what information would be valuable to the mentee.⁴ A mentor with more experience will be better equipped to help the mentee succeed. A mentor that is able to overcome a lack of experience and adapt to the interactions has the potential to help him or her in personal development and leadership skills.

While the issues of organization and experience can largely be solved with an increased time commitment, the third issue of personality difference is difficult to solve, and may require a different mentor-mentee pairing. These interpersonal problems can hinder personal development.² Another issue arises if the mentor perceives competition from the mentee.⁴ Conflicts arise in the relationship when the mentor acts based on personal interests. Another personality difference that can create a conflict is if the mentee has intrapersonal issues such as insecurity. This may make them less likely to open up to the mentor.²

1.3 Successful Strategies

Successful strategies of mentorship relationships include: clear expectations, detailed organization, emotional support, personal connection, and commitment. The mentoring program should be optional.³ If all student-athletes are forced into a mentorship program, there can be a lack of commitment, leading to unsuccessful mentorship. A voluntary program suggests that everyone in the program is committed and has shared values.

To ensure commitment, the program should obligate participation without coercion.² Obligating participation means that all members are expected to put in the same time commitment. This will make the program successful because all members will have equal opportunities for growth.

When developing the program, all members should have a clear understanding of the purpose of the group. Explaining the program means that the members will be made aware of commitment requirements and possible benefits they will receive as a member of the group. Another important element of clear expectations and good communication is reflection on experiences. Authors reported that “reflection and reflective discourse positively affected not only the mentees but also the mentors in energizing and gratifying experiences.”² Reflections allow the other party to know what is helpful and what is less helpful. This can help the participants grow and develop into better mentors and mentees.

Good organization fosters growth for the mentor and mentee. One element that makes peer mentorship programs more organized is the support of faculty. Researchers stated that organization was most effective in groups that “found several faculty who championed the program and one faculty member that acted as the designated leader.”³ Faculty

support is important because it enables the program to have access to resources such as conference rooms to hold meetings. A peer mentorship program does not require many resources, so faculty are usually supportive of such programs. Monthly meetings are important to ensure member involvement. These meetings allow members to share learning experiences, which can help all members grow.³ These meetings also present a good opportunity to “record and celebrate successes with all group members.”³

Sharing successes is a good way to celebrate a member’s hard work and accomplishments. Mentorship relationships are effective when the mentee feels emotional support from the mentor. Mentors should attempt to empathize with mentees and make them feel secure.² If the relationship feels safe, relaxed, and supportive, the mentee will feel more comfortable opening up.⁵ A successful mentor strives to be reassuring, friendly, positive, and understanding.⁶

Mentors can be emotionally supportive of mentees by sharing their own feelings honestly and encouraging their mentees to do the same.⁴ Encouragement and patience with mentees are effective ways to create emotional connections, and this facilitates relationship growth and honest communication. Emotional connection is only possible if the mentor is altruistic and prioritizes the mentee’s best interests.⁴ A mentor that has conflicting interests in the relationship will be unable to form a deep emotional connection. Emotional support can help a mentor form a personal connection with a mentee. Some elements of personal connection are trust, respect, honesty, and sincerity.⁷

These elements of a successful relationship arise from good communication and similar interests. The mentor and mentee must have shared values on the importance of athletics, academics, and career aspirations. Shared values allow mentor to hold mentee accountable. In a personal testimony in Navarro et. al, one mentee reported that her mentor “held me accountable and made sure I focused on both academic and athletic commitments.”⁸ Personal connection is an important element in peer mentorship relationships that comes naturally from shared values and respectful communication.

Successful peer mentorship relationships have high commitment levels from both the mentor and mentee. It is important for both groups to be active.⁶ Frequent communication allows for the development of a personal connection and the ability for both groups to learn more from each other. Effective mentors are “readily available sources of information and guidance.”⁵ The mentors should attempt to make all information they give to the mentees reliable and accurate.⁶ The mentor should have the mentee’s best interests at heart, so the mentor should attempt to give the mentee accurate, specific guidance.

It is also important for both the mentor and mentee to understand that the relationship is reciprocal.⁴ Both groups have something to gain from the relationship. Also, both groups have to put similar levels of commitment into the relationship.

The primary literature’s recommendations for successful relationships correspondingly fit into the five categories described above: clear expectations, good organization, emotional support, personal connection, and commitment. However, there is one question on which views are divided: Should peer mentoring relationships have a strict or flexible schedule? One article reported that both mentors and mentees preferred formal peer mentor-mentee relationship because of reciprocal commitment, and the mentors’ ability to provide reliable, accurate, and specific guidance.⁶ This article favors a strictly scheduled mentorship relationship to ensure similar levels of commitment. Formal mentorship allows parallel activity between different pairs of mentors and mentees. However, other authors have recommended a flexible relationship because it can vary in content, time, and overall goals.³ Although both methods have their advantages, the researchers hypothesize that a flexible relationship is more appropriate for their student-athlete peer mentorship group. Formal mentorship relationships would be difficult with athletic time commitments, especially because these relationships would be formed with athletes on different teams that have different schedules.

1.4 Benefits Of Peer-Mentorship

The available research on peer mentorship strongly supports the idea that peer mentorship programs can be beneficial to both the mentor and mentee. Although there are some drawbacks to participating in a peer mentorship program, such as time commitment, the overall opinion of the articles evaluated is that peer mentorship can be very useful in future career preparation for both the mentor and mentee.

1.4.1 mentee benefits

Mentee benefits can be grouped into the following four categories: academic benefits, social support and mental health benefits, professional development, and personal growth. Mentees report academic benefits from being part of a peer mentorship program.⁵ Student-athletes that were a part of a peer mentorship group had the expectation of obtaining

higher grades.⁸ Mentees expect higher grades because they have received academic support from mentors in the form of advice on which classes to take, along with tips on how to be successful in those classes. Mentees can also receive academic feedback on things to do and not to do, along with experiences that the mentor would have handled differently.

A mentee receives social support from the mentor, which can help the mentee's overall mental health.⁵ Mentors help mentees feel more comfortable and confident by reducing the mentees' stress and uncertainty. Student-athletes that are peer mentored report positive expectations from the college experience.⁸ Positive expectations mean that the student-athlete expects to be successful and to enjoy the college experience. Mentality is an important indicator of how successful and happy a student will be. Student-athletes that are well-peer mentored also perceive higher satisfaction levels with various aspects of their athletic experience than athletes who are not peer mentored.⁹ Mentors help mentees with professional development.⁵ Mentors can teach mentees how to interact effectively with coaches, professors, and other persons of authority. They can also show mentees how leadership skills developed as a student-athlete can be transferred to the work force.⁸

Additionally, mentors can teach mentees about programs available for obtaining experience. The mentee may never learn about such programs without the mentor's guidance. A major benefit of peer mentorship is that the mentee experiences personal growth.⁵ A mentor can help a mentee develop a further sense of identity.⁸ The mentorship experience may help mentees learn what they are good at and what they enjoy doing. Also, a mentor's reassurance and emotional support can increase the motivation and hope of the mentee.⁶ A mentor that challenges a mentee teaches the mentee how to cope with new situations and difficult situations.⁶ Coping skills help prepare mentees for future situations in which they are confronted with difficulties. The mentoring relationship teaches them how to handle these difficulties.

1.4.2 mentor benefits

The mentor benefits by learning leadership skills and experiencing personal growth. Peer mentorship is a good way for mentors to develop leadership skills that are transferable to life after sport.⁸ Student-athletes in the mentor role become better leaders by teaching younger student-athletes about their experiences. They also learn how to lead a group by being inclusive and engaging all members of the group.³

The trait of being a good leader can help student-athletes to succeed after graduation. To be able to be a good leader, mentors must develop good communication skills and team-working skills.⁶ Being a mentor is a way to improve these leadership skills, which helps mentors to be successful later in life.

Mentors benefit in terms of their personal, professional, and social development.⁶ Mentors experience personal growth through increased emotional contentment, increased self-satisfaction, and increased confidence.¹⁰ Mentors also exhibit personal development by strengthening their patience and endurance, as well as self-awareness.⁶ Patience is a quality that translates to life after college. Mentors become more self-aware by seeing situations from a new perspective. By seeing situations from a new perspective, mentors become good problem solvers. Mentors can find solutions for the mentees.⁶ The ability to problem-solve is a way mentors experience professional development. Mentors also develop good social skills by working closely with mentees.

2. Methodology

From the findings from the literature review, two surveys were developed - one targeted toward student-athletes and one targeted toward coaches and advisors. The survey questions highlighted the most important themes on effective and ineffective mentorship as found in the literature review. They also evaluated the possible benefits of mentorship. The survey responses were intended to portray how student-athletes and faculty at the University of New Mexico perceive different mentorship techniques. The surveys were emailed to every UNM student-athlete, coach, and advisor through a Google poll. Each survey contained a mix of multiple choice and free response questions. The student-athlete survey had five sections: agreement to participate, basic demographic information, mentorship from coach/advisors, peer mentorship, and which person they prefer as a mentor. The first two questions were short answers about what techniques the coach or advisor uses that help or hinder the student-athletes' ability to succeed. The third question asked the student-athlete to rank a list of mentorship strategies on a scale of 1-5, with 1 being least helpful and 5 being most helpful. The strategies were ones the researchers defined as prominent in the literature search. The fourth section was about peer mentorship, which can help access what factors make peer mentorship unsuccessful and what the benefits of peer mentorship are. The final section asks which person in a mentorship role, whether a coach,

advisor, teammate, or other individual, had the strongest effect on their athletic and academic success; this question can aid in identifying if the student-athlete pre-med mentorship program should be run by peers or faculty. The responses indicate that UNM aligns with typically practiced best mentorship techniques. They may also show that there are some differences at UNM that result in different techniques being more successful. The coaches and advisors survey also had five sections: agreement to participate, basic demographic information, mentorship from coach/advisors, effective mentorship techniques, and effective mentorship styles. The first three questions in this section were short answer questions asking why the coach or advisor became a coach or advisor, how they mentor student-athletes effectively, and what challenges they face when mentoring student-athletes. The responses revealed what makes a mentorship relationship successful or unsuccessful. The remaining two questions in this section asked if coaches or advisors find peer mentorship beneficial and why. This revealed the attitudes toward peer mentorship at UNM and what ways it can be beneficial. The fourth section asked the coach or advisor to rank a list of mentorship strategies on a scale of 1-5, with 1 being least helpful and 5 being most helpful. The list of mentorship strategies was the same list as in the student-athlete survey. The responses provided an interesting comparison in how student-athletes and coaches and advisors view successful and unsuccessful mentorship strategies. The last section asked three questions designed to assess different mentorship styles. These responses will indicate which style of mentorship coaches and advisors prefer to use. After the survey has been open for two weeks, the responses were compiled to formulate the results. This data was then compared to the results in the literature articles in the discussion section.

3. Data

3.1 Student-Athlete Survey

Fifty-four student-athletes completed survey. The majority of respondents were lower-classmen (freshmen and sophomores) at 61.1%; upperclassmen response was 38.9%. Student-athletes tend to find encouraging words, good communication, positive support, understanding, leadership and individual goal setting to be among the most helpful tools from coaches and advisors in achieving personal goals. The biggest barrier that most student-athletes have had to overcome to solidify a good relationship with their coach or advisor include “not listening to my thoughts”, “lack of any relationship/communication”, “building a personal connection with businesslike coaches”, “fear of being misunderstood”, and “being open minded.”

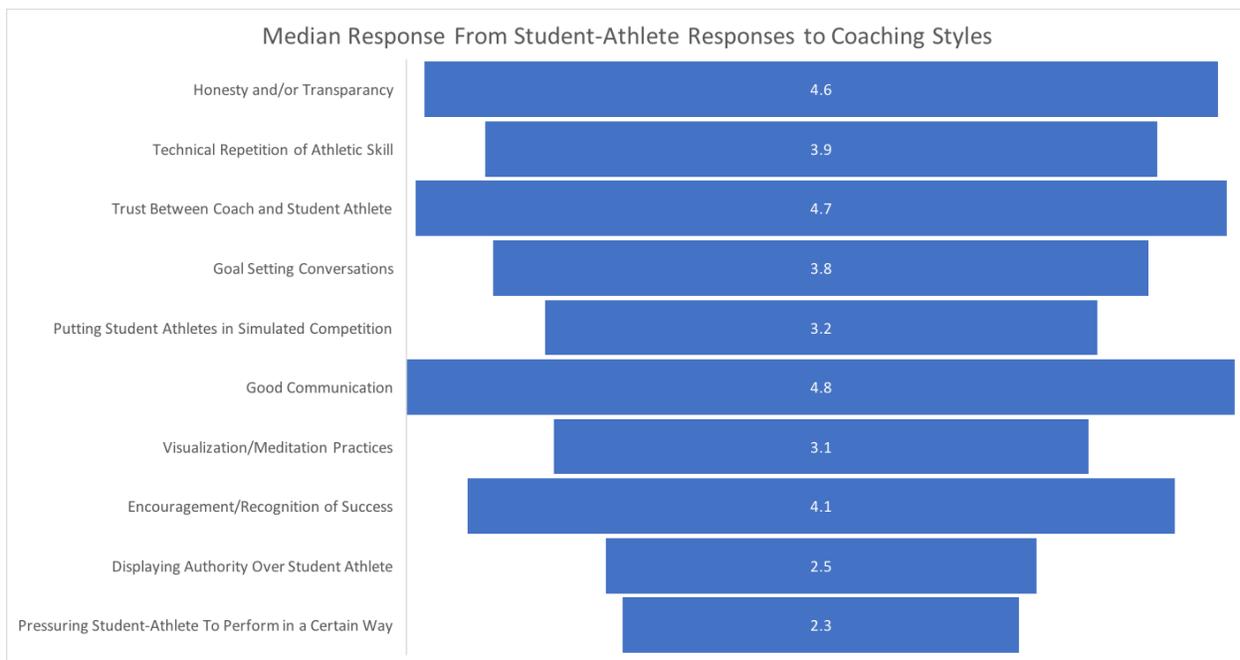


Figure 1. Median Response from Student-Athletes on which common attributes found within college athletics influence success in the student-athlete on a scale of 1 (least helpful) to 5 (most helpful).

In the second section of the survey, student-athletes ranked on a scale of 1 (least helpful) to 5 (most helpful) some common attributes of college coaches. Figure 1 demonstrates how effective specific coaching attributes are at obtaining student-athlete success in sport. A larger median response indicates that the attribute is more effective. Good communication, trust, and honest were the three most effective attributes that student-athletes valued.

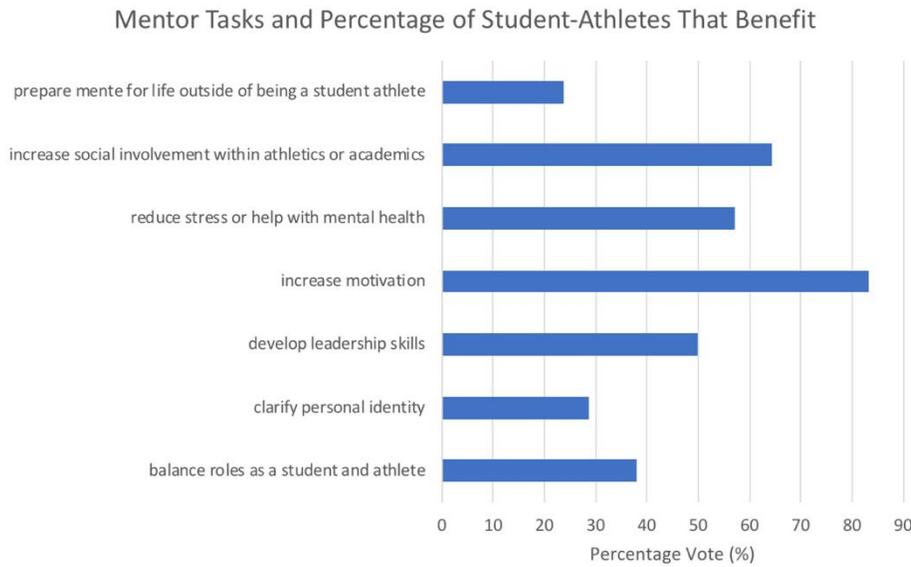


Figure 2. Student-athlete perceptions on which common attributes found within peer mentoring influence success.

Section three discusses the influence of peer mentorship on the student-athlete. 66.7% of respondents said that another student-athlete has acted as a peer mentor to them during their college experience. Figure 2 demonstrates some of the most common ways as to how a peer mentor helped the student-athlete succeed. Peer mentors help student-athletes increase motivation, increase social involvement, and reduce stress.

Some of the noted challenges that student-athletes have experienced within peer mentoring relationships (listed from most prevalent to least) are poor communication, unclear expectations, competition and feelings of inferiority to upperclassmen. In the final section, student-athletes were asked which person in their lives that has had the strongest effect on personal athletic and academic success. Figure 3 illustrates this trend.

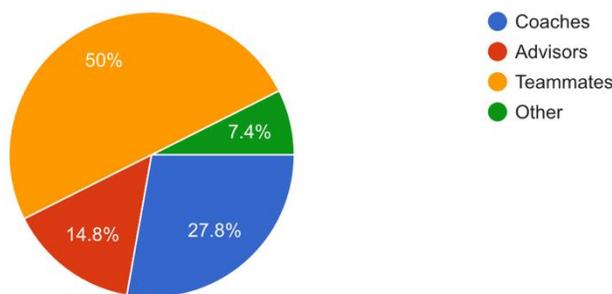


Figure 3. Student-athlete perceptions on who has most influenced personal athletic and academic success within their college experience.

3.2 Coaches/Advisor Survey

Sixteen coaches/advisor completed the survey, seventy-five percent of which were coach responses. Some of the most common reasons as to why a coach or advisor became so are “passion for the sport”, “help teach young athletes about themselves”, and “helping students achieve their goals”; the theme that arose from this question was a desire to help others and do so in an arena that the coach or advisor was passionate about. Some of the most prevalent themes (in

descending order of popularity) in the best lesson a coach or advisor has learned on how to be effective are listening, communication, understanding, empathy, and humility. Some of the greatest challenges that the coaches or advisors have faced in guiding student-athletes to success include building team chemistry and trust, remaining optimistic with disappointing odds or results, and inspiring motivation in both school and sport. In the second section, there was a unanimous vote advocating for the benefit of peer mentorship among teammates; some of the reasons behind this sentiment include “providing more input and feedback,” “role-modeling,” “the peers create a strong team culture,” “sense of comfort” and “learning best from those encountering the same struggles.” The next section of the survey has coaches rank specific attributes on a scale of 1 (least helpful) to 5 (most helpful) on how effective and important they are in obtaining results from the average student-athlete. The median results are below in Figure 4. Similar to the student-athlete survey, coaches’ rate good communication, trust, and honesty as major attributes important to student-athlete success.

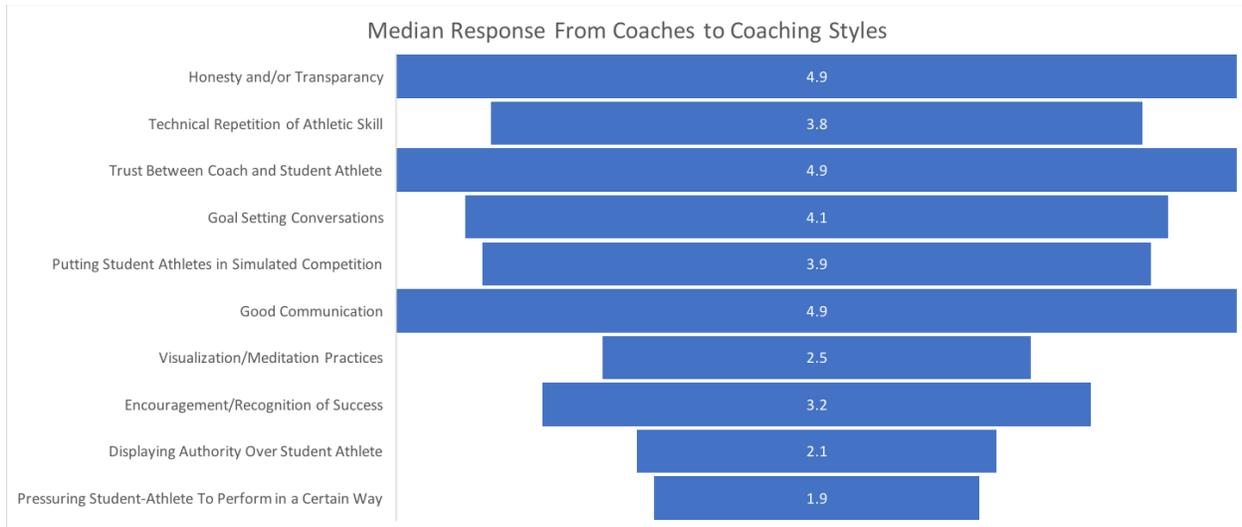


Figure 4. Median response from coaches on which common attributes found within college athletics influence success in the student-athlete on a scale of 1 (least helpful) to 5 (most helpful).

The final section relates to a former study comparing the effectiveness of three different mentorship styles; negative mentoring (being strict on the student-athlete or pressuring them to perform to meet your expectations), socioemotional mentoring (providing emotional support and encouragement to the student-athlete) and instrumental mentoring (providing the student-athlete with tasks to work on to improve their skills) are demonstrated in Figure 5.

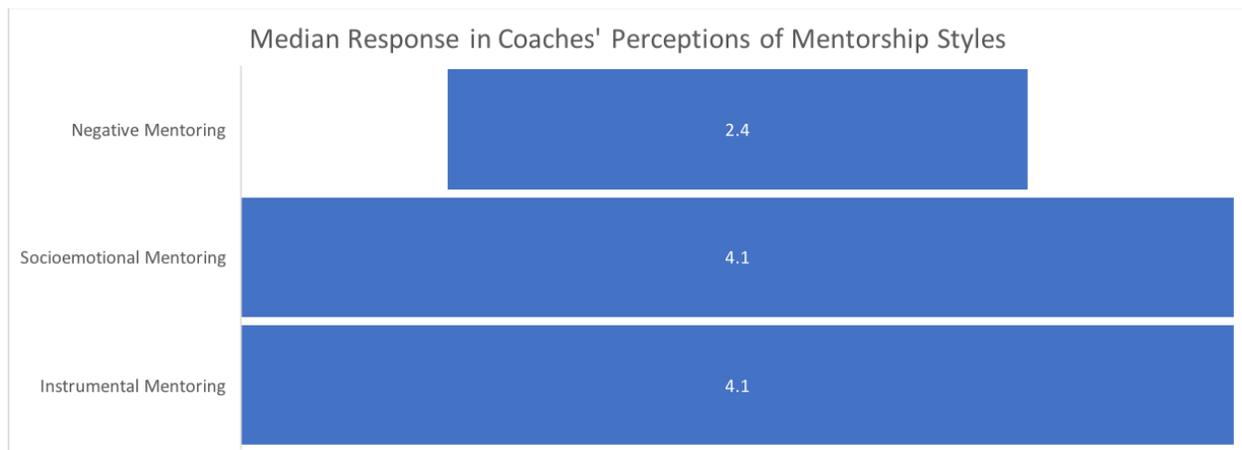


Figure 5. Median response from coaches on which common attributes found within college athletics influence success in the student-athlete.

The median response in these three mentoring styles show which mentorship styles coaches believe will lead to student-athlete success. Negative mentoring received a lower median response indicating that this style was more commonly ranked low in terms of effectiveness. Socioemotional mentoring and instrumental mentoring received a higher median response indicating that these styles had higher rankings of effectiveness. This is presented in Figure 5 above.

4. Conclusion

The survey results revealed the most effective elements of coach and advisor mentorship along with student-athlete peer mentorship. The results generally matched the findings of the literature review on peer mentorship. The survey gave them important insight into the best elements of mentorship at UNM. In addition to giving the researchers information on elements of successful mentorship, the surveys also told them the ways in which student-athletes benefit from mentorship. The survey questions were based around elements the researchers found in the literature review. Therefore, the responses tell the researchers what mentorship elements are the most effective at UNM and what processes are most beneficial to student-athletes at UNM. These will help with the development of an effective student-athlete peer mentorship program at UNM.

Coaches and advisors were asked to provide feedback on three specific mentorship styles cited in the literature. Recent studies have demonstrated that instrumental mentoring (task-based mentoring involving the mentor providing skills and resources to the mentees to help them succeed in a given context) is one of the most successful mentoring relationships in an undergraduate student-to-mentor relationship.¹ The results presented in this study demonstrate that coaches and advisors find both instrumental and socioemotional mentorship to be the most effective in helping student-athletes excel. Additionally, negative mentoring received low scores for helping student-athletes reach success (Figure 5). Therefore, the results support the ideas that task-focused mentoring can be one of the most beneficial mentorship styles whereas negative mentoring provides the mentee with the least benefit for success, potentially due to the mechanism of each mentorship style.

Good communication, honesty, and trust are what the student-athlete survey respondents reported to be of most benefit in a successful relationship with a coach (Figure 1). These three elements were also listed as important in a successful peer mentorship relationship in the literature review. Another element that survey respondents reported as helpful is when the coach encouraged the student-athlete and gave recognition for success. This characteristic was also of importance according to coach and advisor responses (Figure 4). Both student-athlete and coach/advisor responses reported that putting pressure on the student-athlete to perform in a certain way is less helpful in achieving success (Figures 1 and 4). This is not surprising based on personal experience in the college athletics sphere. Pressuring the student-athlete to perform shares similarity with negative mentoring styles, which includes engaging in practices to undermine the mentorship bond.¹ Honesty and trust between the coach/advisor and student-athlete received positive feedback as effective means for achieving success. Therefore, it logically follows that negative mentoring practices were found to be viewed as ineffective means of pushing student-athletes to reach their fullest potential while also developing a solid mentoring relationship between coach/advisor and athlete.

The survey on student-athletes also assessed what benefits student-athletes stated they receive from peer mentorship. The majority of responses listed an increase in motivation, an increase in social involvement, and a decrease in stress as benefits they receive from peer mentorship. These three responses correlate with the literature review. The researchers expect that members of the UNM student-athlete pre-med peer mentorship program would receive these benefits from participation in the program. Before the initial meetings, the group mentors plan to discuss with the members the ability to receive these benefits if the mentorship relationship is successful. The results of the two surveys will provide insightful information to share with the program, so that future members and leaders of the club will know how to be effective mentors for student-athletes at UNM.

Interestingly, there were some categories that the literature review listed as mentee benefits of peer mentorship that the student-athlete survey did not express as beneficial. Less than thirty percent of survey respondents listed clarifying personal identity and preparation for life after sport as benefits. These two were listed in the literature review as beneficial. A possible reason for this discrepancy could be that the survey respondents have likely been mentored by teammates on sport performance but not peer mentored on school or career plans. This result indicates the need for a student-athlete peer mentorship program targeted toward academics. Such a program would benefit students in areas that are not sports-specific, such as clarifying personal identity and preparing for a career. Since the literature review listed benefits that UNM student-athletes do not believe they receive currently, a peer mentorship program could fill this void in student-athlete assistance.

In addition to learning about the effectiveness of a student-athlete pre-med peer mentorship program at UNM through a survey, the researchers in this study have learned about effective elements through experience in the pilot mentorship group. The researchers conducted a meeting in April of 2019 where they helped students pick correct pre-med classes and recommended suitable professors. One benefit of this help is that the mentors can recommend classes that are not commonly known and that require a reference to enroll in. In addition to recommending suitable classes, the mentorship group is able to listen to seniors who are applying and have been accepted into medical school. This helps other members to be motivated and to know the proper steps to get to the position the senior mentors are in. It is encouraging to see other members achieving the goal of the club – to be admitted into medical school. The program helps mentors gain leadership skills and mentees feel more comfortable in the pre-med process. Although meetings with the pilot group have been successful, with the busy time schedules of student-athletes, group leaders have only been able to hold meetings once a semester. This has been an issue to creating continuity and fully assisting underclassmen. In the future, the group has a goal of meeting three times a semester. This will be more attainable once the foundation for the group has been established.

A combined approach of a literature review, survey of student-athletes, coaches, and advisors, and meetings with the pilot group have helped the researchers establish an effective pre-med peer mentorship group at UNM. Future meetings will continue to assist younger student-athletes through the pre-med process through advice on different aspects of medical school applications. A future step in the program is to possibly begin individual one-on-one mentorship between underclassman and upperclassman members. Such mentorship may be beneficial for members by making a mentor available to answer questions on days other than specified meeting days. The goal is to create a pre-med peer mentorship group that will continue to help student-athletes with the medical school process for years to come.

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