Collegiate Athletes’ Perceptions of Adhesive Ankle Taping: A Qualitative Analysis

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Objective: To study athletes’ perceptions of adhesive ankle taping. Design: A qualitative study where athletes were interviewed regarding adhesive ankle taping. Setting: The University of North Dakota in Grand Forks, ND, USA. Participants: Eleven collegiate athletes, all currently taping their ankles, representative of three groups: recent injury, past injury, and no prior injury. Results: Taping resulted in feelings of increased confidence, increased strength, and decreased anxiety for injury or reinjury. Differences were found in responses given by the participants in the three groups. Conclusions: Taping has a psychological impact on athletes. Athletic trainers should make sure they educate athletes about the uses and functions of adhesive tape. Key Words: taping, adhesive ankle tape, psychological perceptions, qualitative, superstition

“Thanks for taping my ankles, it made me run fast!” These are the words of a collegiate football player following a very successful game. In a different opinion, prior to a game, a basketball player refuses to get his ankles taped after sustaining a mild ankle injury, stating that it would only make him feel weak. Still, other athletes insist on continuing to get their ankles taped, day in and day out, prior to every practice and competition long after any existing injury has healed and their ankle function has returned to normal. Why is it that some athletes believe that having their ankles taped will benefit them, while others will not get their ankles taped because they think the tape will have a negative effect? These comments, thoughts, and feelings all relate to the athletes’ perceptions regarding the use of adhesive tape.

Adhesive tape is a popular treatment modality for athletic injuries because it has many uses. It can be used for the retention of wound dressings or compression bandages, for the stabilization of recent injuries, for prevention of additional injury that might result from further participation in activities, and for the protection of acute injuries and support of recent injuries. Taping has been an important part of athletic training; the widespread belief in the effectiveness of ankle taping and the extremely high incidence of lateral ankle sprains among athletes results in the frequent use of adhesive taping on ankles in athletics today. Adhesive taping has
been shown to decrease ankle sprain incidence by providing mechanical support and enhanced proprioception to the foot-ankle complex. The benefits of adhesive tape following an acute ankle injury on other factors, like ankle range of motion, strength, and neuromuscular control, have also been shown. For these reasons, adhesive taping continues to be one of the most commonly used interventions rendered by athletic trainers, yet the psychological effects of taping on the athlete is still unknown.

An athletic injury can be one of the most emotionally traumatic and challenging experiences that an athlete encounters. Psychological responses to injury are of interest because there is a concern for the athletes’ mental health and a concern for how the athletes’ mental states impact physical recovery. Researchers have described the emotional responses following athletic injury and in general, the findings show that athletes experience a mixture of both negative and positive emotions as they proceed through their rehabilitation and injury recovery. As a function of time and healing throughout recovery, negative emotions (e.g., denial and fear) often decrease, while positive ones begin to dominate. The negative emotions can deter healing, and denial is considered especially problematic because it is associated with the athlete avoiding the emotional recovery from injury, and it prevents the athlete from accepting realistic treatment goals. It has been shown that being proactive, optimistic, and intensely motivated are essential aspects of the recovery process.

In summary, adhesive taping is a commonly rendered treatment for ankle injuries that is widely accepted among athletes, coaches, and athletic trainers. The theory behind it, and its effectiveness, have been a frequent question of interest in athletic training research. Researchers have also described athletes’ emotional responses and psychological reactions following athletic injuries. What has not been studied are the athletes’ perceptions and reactions related to adhesive taping. The limited research that does exist is vague. For example, Bleak and Frederick showed that 39% of the football players they surveyed stated that they would tape a body part even if not injured as part of a superstitious pre-game ritual. Certainly, it cannot be concluded that all long-term use of adhesive tape is a superstitious behavior or part of a pre-game ritual. It is also not clearly understood how psychological factors could impact the use of adhesive taping by athletes; therefore, the purpose of this study was to explore athletes’ perceptions of adhesive ankle taping.

**Methods**

**Participants**

Eleven participants volunteered to be interviewed for this study. They were current athletes from five NCAA collegiate athletic teams (i.e., Division II Football, Women’s Basketball and Volleyball, and Division I Men’s and Women’s Ice Hockey). The study was conducted at the end of the first academic semester so all of the athletes were at least half-way through their competitive season. The 5 males and 6 females were between 18–23 years of age (mean = 20.8, SD = 1.54), and all levels (i.e., freshman, sophomore, junior, and seniors) were represented in the sample. Playing experience at the college level ranged from less than 1 year to 5 years (mean = 3.27, SD = 1.19).
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The study was delimited to athletes who currently taped their ankle(s). No consideration was made for long-term use of adhesive tape; athletes may or may not have taped (any body part) prior to the ankle injury they identified for this study. Participants were recruited with the assistance of the certified athletic trainers working with each of the athletic teams. The certified athletic trainers were informed of the study purposes and asked to identify athletes who qualified for the study by fulfilling the requirements of one of the given categories described below. The certified athletic trainers identified 14 athletes but only 7 of them fit categories two and three and therefore all of them were contacted for inclusion in the study. Of the remaining 7 athletes, four participants (two females, two males) were randomly selected to complete group 1. This number was chosen in an effort to keep group numbers as equal as possible.

Group 1, called R, was comprised of those participants who sustained a recent ankle injury and were currently using adhesive ankle tape for one or both ankles during sport activity. R consisted of 4 participants, 2 male and 2 female, each reporting a “moderate” ankle injury (ie, relatively severe, interfered with on-going training and limited participation). Group 2, called P, consisted of four participants (2 male and 2 female), who sustained an ankle injury in the past and continued to use adhesive ankle tape in sport activity. All of these participants reported at least one moderate ankle injury during their participation in athletics at the university. One male and 2 females filled group 3, called NI. These athletes were not injured during their collegiate athletic careers but currently used adhesive ankle tape during sport activity. None of these athletes had ever had a previous significant ankle injury.

Design

A qualitative design was used consisting of a semistructured interview that included a series of open-ended questions. Qualitative designs allow researchers to study issues in detail and have been used in other sport contexts studying injury. In addition, qualitative inquiry was selected for this investigation as the issues studied were relatively unexplored and no valid quantitative measure exists. The open-ended questions allowed the participants to identify a broad range of thoughts and emotions associated with adhesive taping while permitting the investigator to probe and clarify responses. The responses in the participant’s own words became the raw data for the inductive content analysis.

As recommended by Patton, an interview guide was used. It was developed based on previous research related to injury, input from certified athletic trainers, and in accordance with Patton’s qualitative interviewing guidelines. The interview guide was pilot tested on two athletes prior to being used with the intended sample. There were four sections of questions—background or warm-up, injury related, adhesive tape related, and wrap-up. The warm-up questions were designed to help the athlete develop a relationship with the investigator and to allow the athlete to become comfortable with the interview process. The other questions were designed to elicit information regarding the athletes’ thoughts and feelings about their injury and adhesive ankle taping. Probe questions were used to elicit more in-depth responses and to pursue new ideas as they arose. The wrap-up questions gave the athletes the opportunity to expand further on ideas or address any concerns that were not included in the interview.
Procedure

Approval to conduct the study was obtained by the appropriate Institutional Review Board. One investigator interviewed the athletes in a room located at The University of North Dakota. Prior to each interview, the participant read and signed an informed consent form. The interviews varied from 20-30 min in length, and they were all recorded.

Data Analysis

The audiotapes for each participant were transcribed verbatim. The procedures outlined by Patton\textsuperscript{14} were used to inductively analyze the transcripts. Raw data themes identified by the athletes were grouped into like categories by finding relationships and grouping similar topics, establishing a hierarchy of responses, moving from specific to general levels. The analysis was first completed independently by both authors and then they compared codings. Any differences between them were discussed until a consensus was obtained.

Results

The first section of the interview consisted of warm-up questions to obtain background information related to what sport each athlete participated in, what year they were in school, and how long they had been playing their respective sport. This information was used to describe the sample.

The second section of the interview contained questions related to the athletes’ ankle injuries. All 8 athletes in groups R and P had sustained an ankle injury and all but one of them rated it as moderate in severity (the exception was major in severity due to surgical repair). Recall that Group 3, NI, was the noninjured group and had not sustained an ankle injury. With respect to where the injuries occurred, they happened most often during training sessions, with only two occurring during actual competition. Regarding when the injuries occurred, five of the injuries were sustained early in the sport season, with the others occurring in the mid, end, and off seasons (one each). The athletes reported missing one day to three weeks of training, which may or may not have included games. For example, one athlete reported missing no formal team training due to the injury occurring at the end of the season and the subsequent surgery occurring over the summer. At the time of the interview, all of the athletes had returned to full participation in their respective sports, but just three of the eight athletes felt that their injury had fully healed. For example Participant 9 stated, “Yea, as much as they can be you know what I mean like obviously they’re probably going to be weak and whatever, forever, but you know.” Two athletes felt that their injury was not at all healed, “No, I don’t (think it’s healed) but I think it’s one of those injuries that you’re always going to be sore and so taping it and doing rehab on it, I think that it feels as good as it can feel right now,” responded Participant 10. The other 3 athletes didn’t really know if their injury was healed or not. For example, Participant 1 offered the following explanation:

I don’t know. That’s a good question. I don’t know, I think as far as umm, the healing whatever process, I think it probably has but I don’t really know how
the ankle works because it’s not how it used to be in terms of, like I said, like it still really gets sore and it still doesn’t have the, like the, what’s it called, the range of motion as it used to.

The third part of the interview addressed questions directly related to the use of adhesive ankle tape. The first question asked whether the athletes were required to tape their ankle(s). For the most part, participants from Groups R (3 of 4) and P (2 of 4) stated that they were required by their certified athletic trainer to tape their ankle following their ankle injury. Just two athletes, both from NI, responded that they were not required to tape, commenting “it’s my choice.” Four athletes felt influence from their coach to tape their ankles (1 from R, 1 from NI, and 2 from P). For example, Participant 3 commented that his coach “heavily encourages” his team to tape and stated that his team had received “several speeches on tape your ankles.”

The question, “What do you think about the tape?” was used to solicit general impressions about being taped. From the 11 athletes, 42 text units were taken out of the interview data (see Figure 1). Most of the comments were related to what was labeled as the “effects” of taping and these effects consisted of two categories: comments related to the injured area and to psychological states. With respect to the comments to the injured area, most of the responses were from groups R and NI. Almost all of these responses included some mention of the tape making the athletes’ ankles feel “stronger,” and more “comfortable,” and more “supportive.” However, some comments were more negative than positive (ie, the ankle felt “stiff,” “tight,” and the tape was “hard to adjust to”). The second subcategory included responses related to psychological states. There were only four responses all from Group NI and all of these responses made mention to the tape making the athlete feel more “confident.” The second grouping of responses was labeled “feelings” about taping. Comments here included general impressions ranging from “I liked it” to “I hated it.” The last category was labeled as “flow” and included comments like “everybody is doing it,” “it’s not that big of a deal,” and “it’s a good idea to tape.”

Overall, most of the responses for “What do you think about the tape” across the three groups were related to the effects of the tape. Groups R and P were more concerned with the effects of the tape on the injured area, whereas members of Group NI were the only athletes to comment on “psychological states” as an effect of the tape. With respect to the subcategory labeled “feelings,” most of the responses were from members of groups R and P. Groups R and NI were also most likely to tape because “everyone was doing it.”

The responses to the question, “How do you feel about the tape in regards to the way you perform in your sport” were grouped into four general dimensions and are summarized in Figure 2. Most of the comments were related to what was labeled as “helped performance.” These comments varied from “helps performance on psychological level,” to “helps me skate to my ability.” The second category of responses was labeled “no effect.” Comments here included general impressions like “didn’t bother me,” “doesn’t really do much for performance,” and “didn’t even notice it.” The third category of responses were labeled as “restricted at first, and got used to it” and included comments like “beginning was an adjustment,” “at first felt limited,” and “once used to it, didn’t feel limited.” The last category was called “restricting,” and included comments like, “don’t have full movement,” “restricts performance,” and “can’t move as well.”
Figure 1—Organization of text units to “What did you think about the tape?”
Overall, the most popular response given for the effect of tape on performance was what was labeled as “helped performance” except for Group R. For them, the most common response was that the tape had a restricting effect on performance (which they may have gotten used to) or no effect.

For the question “Do you feel that you need to continue to be taped?” the responses were divided into three main categories (ie, yes, no, and don’t know). Organization of the text units is summarized in Figure 3. One category was labeled as “don’t know” and consisted of only two text units: “I don’t know” and “yes and no.” A second main category labeled as “no” consisted of four text units. Responses here included comments like “don’t need it,” “don’t usually roll ankles,” and “not going to get stronger with tape.” Most of the responses were labeled as “yes” and were further divided into the following subcategories: injury/pain related, effects on performance, and psychological effects. For “injury/pain related,” most responses included some mention to taping preventing injury. “It helps prevent an injury from being more worse than it could be,” responded Participant 1, and Participant 2 stated, “I’m just, I guess worried about re-injuring it if it’s more susceptible to injury right now.” Other comments made mention to the tape “relieving pain.”

Umm, just with like the whole pain thing again, like, I don’t think I, umm, maybe if I were not to have it taped just today the pain wouldn’t be that bad but if I were to do it for like the whole week it would get worse and worse everyday like that’s how it was before I was having it taped. (Participant 8)

The second subcategory included responses labeled as “effects on performance.” Comments included general responses indicating the taped ankle “feels stronger” or that the athletes’ would “favor it without tape.”

I would be favoring it (without tape), I’d probably be jumping off one leg and landing on one leg and I would be slow playing defense and things like that, it would be like the bad leg is dragging along with the good leg. (Participant 7)

It’s a comfort factor, I honestly feel like my ankles, my ankles are really loose and I, I sometimes feel like it helps me get a little more spring, like in my step almost because of the amount of times I’ve sprained my ankles. (Participant 4)

The third subcategory included responses related to psychological effects. There were only four responses, and they included statements like “I will continue due to habit or superstition” and “it makes me feel better mentally.” Participant 10 explained how the tape had a psychological effect on her, “I think that it (tape) does offer more support and I think it’s kind of, it just makes me feel better to know that I have support on my ankle.”

Some of the responses also labeled “yes” were not subcategorized. These responses included comments related to “used to it” (n = 2), “peer pressure” (n = 1) and “equipment related” (n = 1). For example, Participant 2 described how he felt “used to” the tape: “It just seems natural to keep all that tape on, I guess,” and “I guess, it just well I’m used to it now and I don’t want to start taking the tape off.” Participant 8 felt that taping her ankle was more equipment related by responding, “I definitely need to have it taped so I can have my skates tight.” One response was coded as “peer pressure.” Participant 1 offered the following explanation:
Figure 2—Organization of text units to “How do you feel about the tape in regards to the way you perform in your sport?”

- **Helped performance**
  - n = 14 (34.2%)
  - Groups: R = 0
  - P = 8 (57.1%)
  - NI = 6 (42.9%)

- **No effect**
  - n = 11 (26.8%)
  - Groups: R = 4 (36.4%)
  - P = 3 (27.2%)
  - NI = 4 (36.4%)

- **Restricted as first and got used to it**
  - n = 8 (19.5%)
  - Groups: R = 6 (75.0%)
  - P = 1 (12.5%)
  - NI = 1 (12.5%)

- **Restricting**
  - n = 8 (19.5%)
  - Groups: R = 6 (75.0%)
  - P = 1 (12.5%)
  - NI = 1 (12.5%)

**How do you feel about the tape in regards to the way you perform in your sport?**

N = 41 text units
Do you feel that you need to continue to be taped?

N = 39 text units

Yes
n = 33 (84.6%)

Groups:
R = 15 (45.5%)
P = 11 (33.3%)
NI = 7 (21.2%)

Don’t know
n = 2 (5.1%)

Groups:
R = 0
P = 1 (50.0%)
NI = 1 (50.0%)

No
n = 4 (10.3%)

Groups:
R = 2 (50.0%)
P = 1 (25.0%)
NI = 1 (25.0%)

Injury / pain related
“prevents injury” “relieves pain”

n = 6 (18.2%)

Groups:
R = 0
P = 3 (50.0%)
NI = 3 (50.0%)

Effects on performance
“stronger” “favor it without tape”

n = 10 (30.3%)

Groups:
R = 6 (60.0%)
P = 4 (40.0%)
NI = 0

Psychological effects
“habit” “superstition”

n = 4 (12.1%)

Groups:
R = 2 (50.0%)
P = 0
NI = 2 (50.0%)
Half way through the season I was just like, oh what’s the point, like it, I felt like I didn’t really need to (tape). So one day I just said heck with it and I didn’t, well then I just kind of got a lot of crap (from teammates and other people), like you’re almost done, why would you stop taping now. So that’s just kind of why I continued as more of like a psychological thing, I think.

Overall, the athletes indicated that they felt they needed to continue to be taped but for different reasons. For group R, none of their reasons were injury/pain related, they primarily felt that taping had effects on performance. For P, there was a split between injury/pain related and effects on performance reasons. For NI, none of the responses were related to performance effects, but rather were injury/pain and psychological reasons.

The next question was, “What did your athletic trainer tell you about ankle taping?” One athlete did not respond to this question. Six (of 10) athletes responded that their athletic trainer told them “something” and the remaining four athletes responded that they were told “nothing.” More specific results from the follow-up question are summarized in Figure 4. For the responses labeled as “something,” most comments were related to “explanations of tape job” or to “function of tape job.” “Explanations of tape job” responses included comments like “what she was doing,” “would be tight at first,” and “explained part of the tape job.” There were only five responses for “function of tape job” and they included comments like “acts like a safety thing,” “gives it more support,” and “why she was doing what she was doing.”

All 11 athletes responded to the question “How would you feel if you were not allowed to tape your ankle(s)?” Responses were coded as either “performance related” or “psychological states,” and are summarized in Figure 5. With respect to the “performance related” comments, responses consisted of two subcategories, “forget about it” and “not play as hard.” Most of the comments were related to what was labeled as “not play as hard” and included comments like “afraid to go as hard,” “with tape can go all out,” and “play more hesitant.” For example, Participant 7 responded, “I would probably play really cautiously and I probably would favor the good leg, you know.” Other comments referred to playing hesitantly in both game and practice situations. Participant 4 stated, “Yes because even on, like I said even on Friday’s when we practice (light) I’m conscious of not having my ankles taped. So I don’t make hard cuts and I don’t do stuff like that.”

I think I’d be more hesitant to cut or do things that I don’t need to do, like you need to cut to create something and I maybe would be less likely to do that, I’d just do what I needed to do to play the game and I wouldn’t make that extra effort that I know could possibly hurt it. (Participant 10)

Yeah, I don’t know. It probably would affect me a little bit you know, I wouldn’t be, I would be a little more hesitant in certain situations in a game you know staying up a little longer when guys are trying to pull me down or making a cut you know maybe when, you know, I guess it probably would affect me a little bit. (Participant 4)

I wouldn’t, especially in a practice, I wouldn’t go as hard or wouldn’t, you know, get tangled up with guys. In a game, I think I’d, you know, forget about it and just play, practice is a little bit different though. (Participant 2)
Figure 4—Organization of text units to “What did your athletic trainer tell you about ankle taping?”

For the second subcategory, “forget about it,” most responses included some mention of “get into game and forget about it” or “wouldn’t even think about it.” For example, Participant 3 offered the following explanation: “The first little bit, you’re like, oh man, I hope nothing happens, but after the first ten minutes, you just forget about it and move on, umm, so it’s not a big deal.” Participant 5 responded, “I mean probably before the game you’d kind of be a little you know, hoping you wouldn’t roll it, but I mean, when the game starts you just, are just playing and worrying about other stuff.”

The second main grouping of responses was labeled “psychological states” and consisted of three subcategories: “something missing,” “worried,” and “mood.” For “worried,” most responses made some mention of being “afraid” or “scared,” “worried for both ankles,” “anxiety about re-injury,” and one participant (Participant 4) even responded, “I would somehow tape my own.” “I’d be scared,” replied Participant 11, “I’m always worried about not having my ankles taped or not having my braces on cause I don’t want to get hurt.”
Figure 5—Organization of text units to “How would you feel it you were not allowed to tape your ankle(s)?”

I would be worried for both my ankles, you know just in case, I mean not so much just the one, the one that I did last pre-fall but, I wouldn’t want to do something in practice and not be able to play in the game on Saturday. (Participant 5)

The second subcategory labeled “something missing” included comments like, “would be weird,” “grown used to it,” and “feel like something’s missing,” “It would feel like something’s missing, like, I don’t know I’d worry about my ankles, especially the bad one when I’m out there because it’s just, I’ve gotten used to it,” explained Participant 2.

I think I am over the fact that it is ok, I think, maybe just because I am coming to an end, but I think, it is one of those things that you make a mental note
of, especially if you are used to it. I think you, it is just almost part of your uniform, it sounds kind of weird but it’s kind of one of those things, I guess it all depends on different people, you know, but for me it’s kind of come to one of those things where I am just used to it and if I don’t do it then I feel like something’s missing. (Participant 1)

There were only four responses to the last subcategory labeled “mood.” The moods ranged from feeling happy to feeling upset. For example, Participant 10 explained, “I would be really happy initially, until I started running and then I’d realize that I would probably fall over, because my ankle would hurt and I didn’t have anything else to support it.” However, Participant 8 and Participant 3 felt differently and offered the following explanations:

Umm, I’d probably be really upset, I’d have to figure out something else, I think, to do cause there’s no, I don’t think there’s any way I could skate without it being taped or whatever, I mean I could but I don’t think I’d perform well, you know. (Participant 8)

I wouldn’t like it. Because that’s probably something that gets me ready to play, both mentally and physically, like you know for games I’ll get my ankles taped and spatted and with the spat you get a lot of extra support and that’s something I think does help quite a bit more than just regular tape, and if you took it away, I’m probably going to complain but what do you do. (Participant 3)

Analyzing the responses by groups showed some interesting results. Group R responded equally between “performance related” and “psychological states.” Athletes from group R responded that they would “not play as hard,” a performance related effect if they were not allowed to tape. On the other hand, participants from Group NI were more likely to respond with comments that were labeled as “psychological states” with the majority of responses related to being “worried” if they were not allowed to tape. For Group P, responses were nearly equally divided among the performance-related and psychological states categories.

All athletes responded that “yes” taping was part of their prepractice or pregame routines. This result might have been expected given that taping was the basis for participant selection; however, follow up questions probed the athletes to consider how it fit into their routine (see Figure 6). Most responses indicated that it was just part of what they do to get ready for the game and was called “process” (ie, “part of getting dressed,” “something that you do everyday,” “part of my pre-game,” and “process of getting ready”). Some participants were more specific, indicating that they felt that it was a part of their uniform, for example, “part of my uniform,” or “like putting on my uniform.” A few comments showed that taping was clearly part of psychological preparation: “helps prepare me to play,” “gets me ready to play both mentally and physically,” “time helps me relax,” and “helps me get into game mode.” Three responses made up the “habit” category: “doing it for so long” and “kind of contagious.”

Of the groups, R and P felt most strongly that having their ankle taped was part of their “process” prior to practice or games. Group P also more clearly identified that it was part of their “psychological preparation.” Group NI responded equally among “process,” “psychological preparation,” and “uniform.”
Figure 6—Organization of text units to “Is taping your ankle a part of your pre-practice or pre-game routine?”
Given a few responses, where athletes indicated they “have the same person tape it,” have a “certain order,” or “plan their day around it” another follow up question was asked to determine if taping their ankle was more of a superstition compared to part of their routine. Three athletes (2 from P, 1 from NI) said “yes” it was a superstition, two athletes (1 from R, 1 from P) said they “weren’t sure,” and six athletes (3 from R, 1 from P, 2 from NI) said “no” that it was not a superstition. A few athletes discussed how the person taping them became a part of their superstition. Participant 6 responded, “Well, if I don’t play very well that one game, I’ll maybe have someone else do it.”

Yeah, I have the same person tape my ankles on Saturdays and the same person spat. Well, I don’t know, you just kind of, my, my first three games, you know I had the same person tape me and the same person spat me and then it got changed and we lost so, and then I went back to the same, and we kept winning again, so I don’t know. (Participant 5)

Comments

The purpose of this study was to explore the athletes’ perceptions of adhesive ankle taping. Most of the participants indicated that they were required to tape their ankle(s) by either their coach or athletic trainer. Analyzing the data for group differences showed that athletes who had not sustained an ankle injury (Group NI) were more likely to be choosing to tape their ankle, whereas the athletes who had sustained an ankle injury were at one point instructed to tape. This result shows that not only do athletic trainers and some coaches require the use of adhesive ankle tape for protection and support, but also that some athletes also believe that the use of adhesive ankle tape is an effective means of protection and support.

Regarding what the athletes thought about the tape, the most striking finding was that athletes who had not sustained an ankle injury were the only athletes to comment on the psychological effects of adhesive ankle tape, comments that included the tape making them feel more confident. The other athletes who had sustained an ankle injury during their collegiate athletic careers focused on the injured area and how the tape specifically made their ankle feel. This is the first study to look at the psychological effects of adhesive tape. These results show that there is a psychological and emotional component of adhesive tape, whether the comments are more psychological in nature regarding confidence or more physiological-based in nature regarding how the tape makes the injured area feel.

About how the adhesive tape affected performance during participation in their sport, past research has shown that athletes will avoid wearing adhesive ankle tape if they perceive that their performance will be hindered. Responses in the current study ranged from feelings that the tape restricted performance to the tape having no perceived effect on performance. Once again, comparison by group responses revealed interesting differences that one might not expect. Those athletes who were recently injured (Group R) felt restricted in their performance at first, but over time, grew used to the tape and no longer felt a restricting effect of the tape. This result seems to be inconsistent with the research of Cordova and colleagues; they found
that if athletes perceive that their performance will be restricted, they will not wear the tape. The athletes in this study who had recently sustained an ankle injury wore the tape even if they felt that their performance was restricted.

One explanation for why those athletes recently injured wore the tape even though they perceived it had a restricting effect may be that they had not had their ankles taped before, thus they were not used to the feeling of the adhesive tape on their ankle. Furthermore, even though they felt restricted in their performance at first, maybe they continued to tape because they were more likely to be required to do so. The athletes from groups P and NI may have taped for a longer period of time and may have become more accustomed to the tape and therefore were able to focus more on the positive effects of the tape. It is important to point out that we are not certain if the athletes felt restricted due to their actual injury or the tape. Naturally, the injury response following an acute injury causes physiological changes that result in a loss of range of motion and therefore may make the athletes’ ankles feel restricted during performance whether they have the adhesive tape on or not. Therefore, another explanation for why athletes who were recently injured felt restricted at first, then grew used to it over time, could be related to the healing process of the injury.

The results from this study also seem to show a progression in psychological responses from a negative view to a positive view (ie, tape restricts performance for those recently injured to helps performance for those with a past injury). Researchers have shown that athletes experience a mixture of both negative and positive emotions as they proceed through their rehabilitation and injury recovery. As a function of time and healing throughout recovery, negative emotions often decrease while positive ones begin to dominate. The results of this study tend to support this in that the negative emotions experienced by those recently injured encompasses their feelings regarding the adhesive ankle tape and as they progress through their healing and recovery, the negative emotions dissipate and positive emotions emerge, as indicated by those athletes with a past history of injury focusing on the positive effects of the adhesive tape.

It is also interesting to note that athletes who had not sustained an ankle injury during their participation as a college athlete responded that the tape had no effect on their performance, yet they still continue to tape. Also, if not allowed to tape, this group overwhelmingly responded more than any other group that they would be worried for injury. This result shows that the use of adhesive ankle tape has an effect on an athlete’s psychological state, not necessarily just on performance.

Cordova et al showed that external ankle support produced little impairment on functional performance tests and that it was beneficial to the athlete in prevention and support of acute ankle injuries. Although the results of this study showed that as a group the athletes were divided among their perceptions of the tape hindering or helping performance, they did seem to agree that tape is beneficial in prevention and support of acute ankle injuries. When the athletes were asked if they felt that they needed to continue to be taped, an overwhelming majority said yes. The athletes who were recently injured felt that they needed to continue to be taped due to its effects on performance, like making their ankle feel stronger or the support provided for their recently injured ankle. Athletes with a past history of ankle injury were divided between the tape being a preventative measure and its effects on performance as to why they felt they needed to continue to be taped.
The athletes who had not sustained an ankle injury did not refer to the performance effects at all.

The athletes were asked what they were told regarding adhesive ankle taping by their athletic trainers. Most responded that their athletic trainer did tell them something, either explanations of the tape job or the function of the tape job. Even so, four out of the ten athletes responded that their athletic trainer told them nothing. This result is practically significant. A well-known role of the athletic trainer is to be an educator and counselor to injured athletes, providing them with information regarding the rehabilitation and treatment of their injury. Current research has studied the influence of the athletic trainer as an educator. In her study looking at emotional responses to the injury and rehabilitation process, Tracey found that participants relied heavily on the athletic trainer’s input as a source of information upon which they based some of their emotional affect. The current study has shown that adhesive ankle tape does have a psychological effect on the athletes, thus athletic trainers should take an active approach to providing the athletes with as much accurate information as possible regarding all aspects of the injury, treatment, and rehabilitation process, including the use of adhesive ankle tape. If the information given by athletic trainers influences the emotional responses of the athletes, then educating the athlete becomes even more important.

There is, however, an alternative explanation for the low number of athletes who felt they were told “nothing” regarding adhesive ankle taping. It may be that the athletic trainers really were educating the athletes, and the athletes were only hearing what they wanted to hear or they didn’t remember what their athletic trainer told them, or they didn’t care and didn’t want to listen. It is unknown whether the athletes were satisfied with their athletic trainer. The athletic trainers’ opinion on their role as an educator is also unknown; perhaps they feel they do an adequate job in educating their athletes. Future research could look into both the athletes’ and the athletic trainers’ perceptions of the athletic trainers’ job of educating and counseling of the injured athlete.

Athletes were also asked how they might feel if suddenly they were no longer allowed to tape. The results show that most athletes would not play as hard versus forgetting about not being taped. The most common feeling among all the athletes was one of being worried for injury or reinjury. Specifically, those athletes who were recently injured (Group R) responded equally between being concerned of both the performance related effects and psychological states if they were not allowed to tape. Of the psychological states, most of the responses from R were regarding feelings that something would be missing if they were not allowed to tape, even though they were recently injured and perhaps just recently started to tape their ankle. This result seems to imply that the athletes had already developed dependence or had become reliant on the tape in a short period of time. In contrast, those athletes who had not sustained an ankle injury (Group NI) overwhelmingly responded that they would be more worried for injury if they were not allowed to tape.

One thing that may affect the athlete’s perceptions of adhesive ankle taping may be how long they have been taping. Not asking this question was a limitation of this study. Participants were chosen for this study if they were currently taping one or both of their ankles at the start of the study; no consideration was made for long term use of adhesive tape and how that could have impacted the athletes’ thoughts and feelings regarding the use of adhesive ankle tape. We do know that none of the athletes were taping at the time they got injured.
As expected, all of the athletes responded that taping their ankle(s) was a part of their prepractice or pregame routine. Follow-up questions revealed that taping was considered to be part of the process of getting ready, part of the uniform, part of psychological preparation, and a few cases it was even part of a superstition. The references to taping as a superstition are consistent with previous research by Bleak and Frederick, who showed that football players would tape a body part even if not injured as a part of a superstitious pregame ritual. Although three athletes admitted that the use of adhesive ankle tape was a superstitious behavior, all of the athletes responded that taping their ankle was indeed a part of their routine. Most of the athletes commented on how taping their ankle helped get them prepared to play or was part of the process of getting ready, an indication that taping their ankle was part of a preperformance routine rather than a superstitious behavior. These results are another indication of the psychological, not just performance, impact of adhesive ankle taping on college athletes.

This study explored collegiate athletes’ perceptions of adhesive ankle taping. The use of adhesive ankle taping has long been a basic fundamental in the profession of athletic training as a viable means of protection and support against acute injuries. In fact, several randomized controlled trials have shown that for athletes with a prior history of ankle injury, ankle taping/bracing can reduce their risk of reinjury by as much as 50%; but this benefit is not as strong for athletes with no prior history of ankle injury. The results of this study clearly showed that besides these aspects of adhesive tape, there are psychological perceptions related to the use of adhesive ankle tape as well. The psychological perceptions ranged from feelings of increased confidence, increased strength, decreased anxiety for injury or reinjury, mental preparation prior to performance, part of preperformance routines, and even part of superstitious behaviors. All of the athletes in this study felt adhesive ankle taping was part of their preperformance routine; future research should consider how it fits into their preparedness, considering the effect on confidence and anxiety levels. This study also revealed that athletic trainers should be more aware of educating the athlete about the uses and functions of adhesive tape, considering the psychological impact it has on the athlete. Future research should consider the relationship between the athletic trainer and the athlete to determine if there is a breakdown in communication between them and explore the satisfaction levels of the athlete for the role of the athletic trainer. Finally, a question raised throughout this study was how the injury healing process could impact the perception of the tape having a restricting effect. Future research could consider this impact by following one person throughout the healing process, tracking the perception of the tape and injury over time. In conclusion, taping an ankle usually takes less than 2 minutes; it is interesting that the events that occur in this short period of time can have such a profound impact on an athlete’s psychological preparation.

References