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Abstract

Previous research has highlighted the importance of relationships (e.g., athletic therapist/client) and psychological skill use to manage negative emotions (e.g., frustration, anger) in order to obtain optimal adherence and injury rehabilitation outcomes. However, the relationship between student athletic therapists and varsity athletes has not been examined. Thus, the objective was to examine the relationship between student therapists and varsity athletes and psychological skill use in injury rehabilitation in relation to adherence. Two senior student therapists and three varsity athletes who had completed injury rehabilitation were recruited to participate in semi-structured interviews. Transcripts were analysed using thematic analysis. Both groups of participants described the role of the student therapists as being primarily focused on injury prevention and management. Furthermore, the peer relationships that developed were valued. Goal-setting was used in injury rehabilitation to guide progress, improve adherence, and frame injuries as temporary setbacks. Participants were familiar with imagery from use in other context, however did not report using it in injury rehabilitation. Finally, participants acknowledged that adherence was not perfect, but acknowledged the peer relationships and collaborative goal-setting as helpful. These findings highlight the importance of the relationship between student therapists and athletes and suggest these relationships may support athlete adherence.

Keywords

Social Support, Adherence, Peer Relationship, Imagery, Thematic Analysis

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Importance of the Student Therapist/Athlete Relationship and Goal-Setting in Injury Rehabilitation

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Previous research has highlighted the importance of relationships (e.g., athletic therapist/client) and psychological skill use to manage negative emotions (e.g., frustration, anger) in order to obtain optimal adherence and injury rehabilitation outcomes. However, the relationship between student athletic therapists and varsity athletes has not been examined. Thus, the objective was to examine the relationship between student therapists and varsity athletes and psychological skill use in injury rehabilitation in relation to adherence. Two senior student therapists and three varsity athletes who had completed injury rehabilitation were recruited to participate in semi-structured interviews. Transcripts were analysed using thematic analysis. Both groups of participants described the role of the student therapists as being primarily focused on injury prevention and management. Furthermore, the peer relationships that developed were valued. Goal-setting was used in injury rehabilitation to guide progress, improve adherence, and frame injuries as temporary setbacks. Participants were familiar with imagery from use in other context, however did not report using it in injury rehabilitation. Finally, participants acknowledged that adherence was not perfect, but acknowledged the peer relationships and collaborative goal-setting as helpful. These findings highlight the importance of the relationship between student therapists and athletes and suggest these relationships may support athlete adherence. Keywords: Social Support, Adherence, Peer Relationship, Imagery, Thematic Analysis

Athletic injuries carry a high cost to healthcare systems. The evaluation and immediate acute care of athletic injuries in youth athletes alone have been estimated to have an annual cost of 1.3 billion dollars in the United States (Hergendoeder, 1998) and 188 million dollars in Canada (SMARTRISK, 2009). This figure does not account for the long term costs of injuries associated with rehabilitation (i.e., physiotherapy, athletic therapy). The prevalence of athletic injury can be clearly seen in intercollegiate sport. The National Collegiate Athletic Association (NCAA) has monitored injury reports for over a decade and has estimated that injury rates across the three divisions in the NCAA were approximately four injuries for every thousand player exposures in practices and fourteen injuries for every thousand player exposures in games (Granquist, Gill, & Appaneal, 2010). These injuries range from relatively minor sprains and strains to broken bones and torn ligaments, and the majority require some degree of rehabilitation before the athlete may safely return to play. Often, the rehabilitation of intercollegiate athletic injuries is overseen by an athletic therapist (athletic trainer in the United States). Athletic therapists are healthcare professionals within the sports medicine model of care whose scope of practice includes prevention, assessment, emergency management, and rehabilitation of injuries through rehabilitative therapies (i.e., electrical, thermal, and physical modalities), conditioning exercises, and education (Canadian Athletic Therapists Association, n.d.).

Optimal recovery outcomes are strongly associated with high adherence to injury rehabilitation programs and poor adherence has been linked to increased chances of re-injury (Granquist et al., 2010). Adherence in injury rehabilitation has been defined as “active, voluntary collaborative involvement of the patient in a mutually acceptable course of behaviour to produce a desired preventative or therapeutic result” (Meichenbaum & Turk, 1987, p. 20). Unfortunately, due to the pressures from coaches and teammates to return to play and negative emotions experienced by injured athletes, rates of adherence to athletic injury rehabilitation are low (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Robbins & Rosenfeld, 2001). Adherence rates within populations of injured athletes have been found to be as low as 40% in some studies (Levy, Polman, Clough, Marchant, & Earle, 2006).

In addition to the physical trauma, athletic injuries take a toll on the athlete psychologically. The psychological impacts of injuries typically come in the form of negative feelings such as anger, confusion, and helplessness, as well as conditions like anxiety and depression (Folkman et al., 1986; Washington-Lofgren, Westerman, Sullivan, & Nashman, 2004). These negative emotions have been found to interfere with an athlete’s adherence to prescribed injury rehabilitation and thus impede recovery (Cramer Roh & Perna, 2000). As a result, athletes may fail to make more positive cognitive appraisals such as viewing injury and injury rehabilitation as an opportunity to show ones inner strength and commitment, learn about oneself, and learn of the importance of injury prevention (Tracey, 2003). Psychological skills, such as goal-setting and imagery, which can be used by athletic therapy staff to reduce these negative emotions (Hamson-Utley, Martin, & Walters, 2008). By using these skills with injured athletes, athletic therapy staff can help injured athletes manage negative emotions by regaining focus on rehabilitation, increasing self-confidence, increasing motivation, and reducing anxiety (Cupal & Brewer, 2001; Driediger, Hall, & Callow, 2006; Evans & Hardy, 2002).

In addition to being able to help manage the negative feelings resulting from injury by using psychological skills, training staff are ideally situated to provide injured athletes with social support (Gordon, Milios, & Grove, 1992; Robbins & Rosenfelt, 2001). According to Washington-Lofgren and colleagues (2004), the athletic therapist is best suited as a source of informational support for the injured athlete due to their expertise and experience in treating athletic injuries. Student athletic therapists may also be an effective source of social support due to the peer-level relationship between themselves and varsity athletes. Often at smaller institutions, student athletic therapists are an injured athlete’s primary contact with the training staff (Granito, Hogan, & Varnum, 1995). Although they are less trained than certified professionals (i.e., athletic therapists and physiotherapists), student athletic therapists may be able to (a) interact with varsity athletes as peers, (b) use basic psychological skills, (c) make use of injury rehabilitation knowledge, and (d) provide various types of social support to injured athletes to bolster rehabilitation adherence and outcomes. This is important because adherence to injury rehabilitation programs has been found to reduce negative complications of injury and has been associated with a faster return to play (Granquist et al., 2010).

It is important to understand the student therapist/varsity athlete relationship from the perspectives of both groups, given that this relationship may be different than that of professional athletic therapists and athletes, and how psychological skills such as goal-setting are used in these relationships during injury rehabilitation. Thus, the purpose of this study was to examine the relationship between student athletic therapists and varsity athletes and psychological skill use in injury rehabilitation in relation to adherence. The findings of this research may be of interest varsity athletics departments, particularly athletic therapy staff, as well as classroom instructors or supervisors of student athletic therapists.

Role of the Researcher

I initially intended to complete an undergraduate degree in Kinesiology before pursuing certification as an athletic therapist. As a result, I enrolled in the injury management stream of courses and gained applied experience working closely with varsity athletes to prevent and rehabilitate injuries. Through these applied experiences and informal conversation with my student therapist colleagues, it was apparent that varsity athletes formed close relationships with the student athletic therapists assigned to their teams. Furthermore, helping injured athletes through the rehabilitation process provided a glimpse of the emotional toll injuries can have on these individuals. I approached Dr. Shields as a supervisor for a directed readings course exploring psychological aspects of athletic injury rehabilitation in greater depth. Readings from the directed readings suggested that therapist/client relationships in injury rehabilitation had an impact on the quality of the rehabilitation outcomes and that the use of simple psychological skills such as goal-setting and imagery during rehabilitation may be one way by which these relationships impact rehabilitation outcomes. It was my intent to explore the relationship between student athletic therapists and varsity athletes and their perceptions of the use of goal-setting and imagery inform principles of best practice for similar student athletic therapist training programs.

Methods

Design

This study used a basic interpretive qualitative methodology (Merriam, 2002) which was cross-sectional and retrospective in design to gain a greater understanding of the use of psychological skills in the rehabilitation process of injured athletes with student therapists. The selection of a qualitative methodology, in line with principles of constructivism (Guba & Lincoln, 1994), allowed participants to express their perceptions of their rehabilitation experiences and interpret them based on their values, thoughts, and opinions. Retrospective interviews were conducted with two groups of participants: varsity athletes, who had suffered an injury earlier in the season; and senior student athletic therapists, who had been working with a varsity athletics team as a practical component of a stream of courses. Retrospective interviews were used as these individuals had completed rehabilitation and were able to engage in a reflective process (Giorgi & Giorgi, 2008).

Procedure

Ethics approval from the university's Research Ethics Board was obtained prior to the study. Participants were recruited using a convenient and purposeful sampling procedure (Patton, 2002). All senior student athletic therapist students were provided with an invitation letter which contained the general purpose of the study, provided the contact information of the first author, and invited them to contact the first author if interested in participating in the study. Similarly, an invitation letter in which athletes that were completing or had completed injury rehabilitation were informed of the general purpose of the study and invited to contact the first author to participate. All interested participants who contacted the author were asked to schedule an individual semi-structured interview with the first author at a mutually convenient time that lasted between 30 and 46 minutes ($M = 36$ minutes). All interviews took place in an interview room in the Exercise Psychology Lab and were audio recorded. Informed consent was obtained from participants prior to the beginning of the interview.

The interviews followed a semi-structured interview guide consisting of three sections (1) the relationship that exists between varsity athletes and student athletic therapists; (2) psychological skill use during injury rehabilitation, with a focus on goal setting and imagery; and (3) adherence to injury rehabilitation. An example of a question meant to assess the relationship between athletes and student athletic therapists is, "What role do you see the student athletic therapist playing in the care of injuries and athletic performance?" An example of a question used to assess psychological skill use in injury rehabilitation is, "Can you describe your use of imagery in your rehabilitation?" When asking about injury rehabilitation adherence, an example question that was used was "How well do you think (you/your athletes) followed the rehabilitation instructions given by your (student therapist/given by you)?" Probing questions were used when appropriate. An example includes asking what the athlete visualizes to get a more complete assessment of one's imagery use. While interviews with all participants probed into each of the three primary aspects of the rehabilitation process, the questions asked of the student athletic therapists varied slightly from those asked of varsity athletes due to their different roles in injury rehabilitation (e.g., "Describe your use of goal-setting with your injured athletes" vs. "Describe how your student therapist used goal-setting with you.")

Participants

Varsity athletes. Three varsity athletes, who had completed rehabilitating an athletic injury, were recruited to take part in this study. One athlete was an 18 year old first year player on the women's varsity basketball team who had suffered a MCL sprain that kept her from play for approximately one month. She was interviewed two weeks after returning to play. Another athlete was an 18 year old, first year player on the women's varsity soccer team. She has suffered a strain to her quadriceps that kept her from play for approximately two weeks and a back injury that removed her from play for another 2 week period later in the season. This athlete was interviewed approximately 3 weeks after returning to play after the injury to her back. The final athlete was a 21 year old, fourth year player on the men's varsity basketball team who suffered a sprain at the acromioclavicular joint. His injury kept him from play for approximately 3 weeks and he was interviewed less than a week after returning to play.

Student athletic therapists. Two senior student athletic therapists, a 20 year old female and a 21 year old male, were recruited to participate. Both student athletic therapists were enrolled in their final year (i.e., fourth) of a Kinesiology undergraduate degree offering an athletic injury management stream. Students apply to this stream after completing an elective course typically taken in the second year and are placed with a varsity team as student athletic therapists in their third and fourth years. The student athletic therapists that were interviewed worked with the women's varsity rugby and men's varsity basketball teams respectively.

Data Analysis

Analysis began with the first author transcribing the interview transcripts verbatim using InqScribe v. 2.1 (Inquirium, 2005). Data from the interviews with student athletic therapists were analyzed separately from the varsity athletes to provide allow a clear distinction between how the two groups perceived psychological skill use and the student athletic therapist/varsity athlete relationship. Analysis followed a deductive thematic analysis using the steps proposed by Braun and Clarke (2006) in which adherence, psychological skill use, and the student athletic therapist/varsity athlete relationship were areas of interest. First, transcripts were read multiple times to become more familiar with the data. Second, raw responses were extracted from the transcripts copied into a spreadsheet and deductively coded with initial codes (e.g., emergency injury management) with adherence, psychological skill use, and the

student therapist/varsity athlete relationship as guiding areas of interest. Third, similar codes were grouped together creating themes (e.g., role of the student therapist) and larger categories of adherence, psychological skill use, and the student athletic therapist/varsity athlete relationship. Fourth, themes were reviewed with the second author, an experience qualitative researcher, in a peer debriefing process (Lincoln & Guba, 1985) to ensure internal homogeneity (i.e., common features within a theme) and external heterogeneity (i.e., features differ between themes) of the themes (Guba, 1978). Fifth, through further discussion with the second author, themes were named and defined. Finally, the first author selected participant quotes which best represented the data and produced with multiple drafts in consultation with the second author.

Results

The findings of this research are presented separately for varsity athletes and student athletic therapist. Synthesis of key findings between the two groups occurs in the discussion.

Varsity Athletes' Perspectives

Relationship. Athletes frequently mentioned the role of the student athletic therapist. To the athletes, the student athletic therapists were responsible for injury prevention and management first and foremost:

Definitely with standard tape jobs and rub downs and stuff like that but, with my therapist I like to make them feel as they're part of the team because essentially they are. Without them if we got injured we wouldn't know what to do. (A1)

Another athlete described the student athletic therapist's role on the team as a mix of authority figure and peer, "To me I kind of see them as an assistant coach and they are like a friend" (A2). This peer-level relationship quality was common to all the athletes with one saying "We'll sit down and study in the lounge do homework together and stuff like that so I would say we are pretty close" (A1) and another saying "And it's a little different then talking to [the Head Athletic Therapist] because they are somebody your age that you know and that you trust. So I think it is important both performance wise and mentally" (A3). Further, the athletes also acknowledged a difference between approaching the student athletic therapists and physiotherapists, "And you just aren't afraid because with physios I find sometimes they take things like *you have to sit out* [athlete's emphasis]. I think it's just an athlete's fear. Like it's just a lot easier approaching the student therapists" (A2).

Psychological skills. Athletes described a process of goal evaluation and re-evaluation with student athletic therapists. Here, goals that had been set in conjunction with the student athletic therapist over the course of rehabilitation were revisited periodically and re-evaluated in light of rehabilitation progress or setbacks. This theme is illustrated well by one athlete:

I think my first goal, playing in Ontario, didn't happen but the one we made after that was playing [at a nearby university] this weekend. And during that timeframe, I think it was 3 weeks or so, from the feedback that I got from my trainer [student therapist] and my physiotherapist I knew that there was no way I was not going to play this weekend. (A1)

The athletes also discussed the benefits of goal setting in injury rehabilitation. One athlete commented on the use of goals putting him into an appropriate mindset for injury rehabilitation

and prevention, “I think that they really helped, setting those goals made me proactive in trying to strengthen everything to get back earlier than anticipated” (A3). Another athlete commented how her student athletic therapists used goal setting to motivate her to complete her rehabilitation:

Well it was kind of like setting those goals so that as soon as I reached it I felt accomplished. It kind of makes you strive to get better. I guess that's why they would do it. It's how you recover in a healthy way. (A2)

Another psychological skill athletes made use of was imagery. Athletes initially referenced using imagery as a part of practice or games. For example, a soccer player described how she made use of imagery during dead ball situations to help make tactical decisions, “But sometimes let's say the play is out of bounds or like it's going to be a throw-in. I kind of take a look around and visualize my options” (A2). When asked about using imagery in injury rehabilitation, the athletes discussed using imagery as a way of remaining mentally fit to play rather than as a rehabilitation tool, “So I feel like if you just mentally go over the plays and the practices in your mind it's going to help you come back and smoothly transition into your role again on the team.” (A3)

Adherence. Athletes reported listening to the rehabilitation guidance provided by the student athletic therapists but acknowledged that they did not adhere perfectly:

I think I did that fairly well... I didn't do it when I wasn't at practice so that might have been a little bit of an issue but when I was at practice I was always thinking about and rehabilitating the injury. (A3)

One common reason for following the rehabilitation instructions from the student athletic therapists had to do with the student athletic therapists displaying their competencies:

I'm going to go with a combination of their skills and knowledge because you saw that they're going through these tests and trying to figure out what your injury was and once they knew what your injury was they had the knowledge to help rehabilitate the injuries. So I think that was something that was definitely a confidence builder for me. (A3)

The athletes commented that the student athletic therapists seeking help when a situation was beyond their knowledge was also a source of confidence in the therapist's abilities, “Even with just like taping like my quad and stuff like that like they just knew everything. And like I said if they didn't they would go to [the Head Therapist].” (A2)

Student Athletic Therapists' Perspectives

Relationship. The most prominent theme in regards to the student athletic therapist/varsity athlete relationship was the role of the student athletic therapist. The therapists commented on the change in their role from an assistant in the previous year to the senior therapist. A significant part of this change was an increased level of responsibility for not only rehabilitation and prevention activities, but also with administrative tasks associated. This notion was captured by one of the student athletic therapists:

I think a lot of it was I was in charge now and so I was like a really big liaison between them and [the Head Athletic Therapist]. And like there are all the

forms; like you have to deal with all their medical forms, and travel forms....
And so I think they saw me more as an authority figure. (ST1)

Student trainers also regarded their new role as senior therapists as requiring a greater level of professionalism. Not only were they expected to act professionally with the athletes, coaches, and officials, but they noticed that they were also treated with more professionalism themselves, “And [the athletes] treat both professionally, but they treat the senior with more professionalism and go to you more often, the vast majority of the time, they keep you a little more in the loop which is good” (ST2). While the new role as the senior student athletic therapist with the team increased the level of responsibilities they had, the student athletic therapist also noted that they were closer with their athletes as friends and peers. One student athletic therapist addressed this:

Because you know me being there and spending time with them and then if they want to ask something about their knee hurting or their ankle or wrist hurting they can... When I'm at games or at practice that's what I'm there for. And even outside of that. (ST2)

This new closeness was believed to facilitate more open conversations with the athletes concerning injuries and rehabilitation:

But then this year I was kind of like I know them more now and I kind of got closer with them. And I think that keeping my distance might have been holding me back almost because now that they know me more, they are more likely to come up to me and talk to me. (ST1)

Psychological skills. Student athletic therapists reported being aware of skills like imagery or visualization, but did not report making use of these particular skills with athletes as a part of injury rehabilitation, “I mean like when they get injured I'm not like visualize your foot working well, I don't usually use those sort of techniques.” (ST1). Student athletic therapists, unlike the athletes, were much less familiar with the use of imagery. Because of the lack of familiarity with imagery, student athletic therapists did not make use of imagery as a part of injury rehabilitation. However, the student athletic therapists saw the potential value in using imagery as a part of the return to play protocol:

If they have a sprain or after a reconstructive surgery, after rehabilitation they aren't going to be trusting in that joint. So if they were to use visualization and try to picture themselves comfortable and relying on that joint again it would help. (ST2)

Student athletic therapists were more familiar with goal setting and made use of this skill frequently with their athletes, “We want to leave [the injury] a day and once we get it reassessed in the near future, that's when I will set more goals” (ST2). Student athletic therapists found they were able to use the goals of the team (e.g., qualifying for conference championships) and individual player (e.g., earn a spot on the starting lineup) to clearly communicate the severity of an injury and improve adherence:

So right away I try to start like *okay you're hurt and you need to come out because you know we have a more important game next week*. And just try to emphasize right from the get go that this is a pretty serious thing. (ST1)

The student athletic therapists were well aware of some of the benefits associated with using goal setting. One student athletic therapist believed that goal setting improved athlete adherence by creating positive feelings related to goal achievement:

I think if an athlete can actually see progression and set goals...they're going to feel more like they have accomplished something and get a more positive outlook. And then that positivity is going to lead to continued effort and will therefore speed up the final goal [of returning to play]. (ST2)

Adherence. The student athletic therapists discussed their peer-level relationship with their athletes as contributing to their athletes' levels of adherence. One source in particular that was noted was their seniority, "I feel, luckily for me I am an upper year student therapist, so I feel that they follow my advice a little bit more so than myself say last year or one of the junior therapists this year." (ST2) Student athletic therapists also mentioned barriers to athlete rehabilitation adherence. While the student athletic therapists acknowledged that a few athletes simply neglected to follow rehabilitation advice, the student athletic therapists believed that the majority did not adhere for other reasons. One of the more significant reasons, according to the student athletic therapist, was athletes having to change their routines to accommodate rehabilitation:

I just think it's breaking routine or they are just not used to icing two more times before they go to sleep. Or just aren't used to sticking a pillow under their mattress or elevating when they are sitting in a chair. So again, adherence might be a little bit lower, not necessarily from neglect, but just from not being routine, and not having the norm I suppose. (ST2)

Discussion

The purpose of this study was to examine the relationship between student athletic therapists and varsity athletes and psychological skill use in injury rehabilitation in relation to adherence. The interviews with both student athletic therapists and varsity athletes provided insight into the rehabilitation process from the perspectives of both groups. The primary findings were that both parties viewed goal-setting as a key component in injury rehabilitation, and that both student athletic therapists and injured varsity athletes spoke to the importance of the role of the student athletic therapists.

Both student athletic therapists and varsity athletes reported using psychological skills although to varying degrees. Varsity athletes were more familiar with imagery than student athletic therapists and made use of it in games and practices, but did not report using imagery in injury rehabilitation. This is in contrast with the results of a number of studies that found that injured athletes make use of imagery either as a part of directed sessions or in self-guided sessions (Driediger, Hall, & Callow, 2006; Milne, Hall, & Forwell, 2005; Sordoni, Hall, & Forwell, 2000; Wesch, Hall, Prapavessis, Maddison, Bassett, Foley, Brooks, & Forwell, 2011). This may be because the varsity athletes are inexperienced with significant injuries and the use of imagery in rehabilitation. Intervention programs designed to increase student athletic therapists' familiarity with imagery and how to use it in injury rehabilitation may be a direction for future research.

While imagery was not used often as a part of injury rehabilitation, both groups reported making extensive use of goal-setting. Goal-setting being used more than imagery should not be surprising given that goal-setting is skill that is familiar to the majority of people (Theodorakis, Malliou, Papaioannou, Beneca, & Filactakidou, 1996). In injury rehabilitation,

the goals that were set were step-by-step, progressive goals that served to guide the athletes through rehabilitation. An example of these progressive goals would be that an athlete with a quadriceps strain would have to regain full, pain-free range of motion before beginning to strengthen the muscle and participate in full practices. As one athlete phrased it, the progressive goals gave “an end line” to work towards. Other goals that were set were in relation to return to play. These goals were in reference to a timeframe in which the injured athlete would be able to return to competition. While these goals were not always met, they helped to assure the athlete that the injury was only a temporary setback.

In addition to the use of psychological skills use it was clear that the relationship between the two groups was more than a transfer of knowledge or management of a rehabilitation program; both groups valued the other as sources of friendship and social support. The relationship between student athletic therapists and injured athletes being valued beyond the therapist’s skills and knowledge is consistent with research that examined the relationship between professional athletic therapists and injured athletes, and physiotherapists and clients (Levy, Polman, & Clough, 2008; Robbins & Rosenfeld, 2001; Stiller-Ostrowski, Gould, & Covassin, 2009). While it was recognised by both student athletic therapists and athletes that a significant part of the role of the student athletic therapists was injury prevention and to facilitate injury rehabilitation, it was also made clear that student athletic therapists were also valued as sources of social support. This finding is not surprising given that athletic therapists and athletes spend vast amounts of time together during competition, practice, and rehabilitation; and student athletic therapists fill this role as well as being a peer (Gordon et al., 1992; Robbins & Rosenfeld). It was this peer-level relationship that was seen as particularly valuable to both groups. The peer-level relationship may have decreased the formality of the relationship, but appeared to make it easier for the injured athlete to seek assistance.

The openness and trust that appeared to come as a result of the peer-level relationship allowed the student athletic therapists to better serve the injured varsity athletes in the role of facilitating injury rehabilitation. The relationship between student athletic therapists and varsity athletes also helped with athlete adherence to injury rehabilitation. By being in frequent contact with the athletes, on and off the field, student athletic therapists were readily available to answer rehabilitation related questions and address concerns. A practical implication may be for head athletic therapists to encourage the student athletic therapists they oversee to develop the peer relationships they have with their student athletes in order to better detect more subtle injuries (i.e., minor strains and sprains) before they develop into more serious injuries and to provide meaningful support to injured athletes.

In addition to the peer relationship between student athletic therapists and varsity athletes facilitating adherence, the athletes also viewed the student athletic therapists’ knowledge and skills as a reason to adhere to their rehabilitation instructions. Furthermore, while the student athletic therapists were confident in their abilities, the athletes appreciated their ability to recognise when a situation was beyond their capabilities and seek more qualified assistance. Thus, student athletic therapist should be encouraged to apply their skills and knowledge, but not be afraid to admit when a situation is beyond their control.

The current study provided a unique examination of the context of athletic injury rehabilitation adherence by examining the use of psychological skills and the relationship between student athletic therapists and athletes, which to the knowledge of the authors has not been examined together within the context of a single study. This work builds on previous work by examining these relationships qualitatively by integrating the perspectives of both student athletic therapists and varsity athletes. Further, this extends previous work by examining the role of student athletic therapists as opposed to established professionals. In doing so the peer to peer-level relationship that exists between student athletic therapists and varsity athletes was

able to be better understood and identified as a major component of injury rehabilitation in varsity athletics.

Despite the strengths of this study, there are a number of areas in which future work could improve. First, while qualitative work is focused on the quality or meaning of participant responses rather than the quantity of participants, the small number of participants in the study limits the extent to which the results of the study may be generalized. Future work in this area would benefit from larger samples that may allow for more generalizable results and the examination of potential differences across variables including injury severity, sport type, and size of the school. Additionally, the study would have benefitted from having the perspective of both the student athletic therapist and an athlete from the same team as only one such pair (i.e., the athlete and therapist with men's basketball) existed in the current study.

Overall, the qualitative nature of the study allowed participants' views and opinions to be expressed in their own words and these insights into the perspectives of student athletic therapists and varsity athletes may help inform principles of best practice and training for student athletic therapists. It is clear that the nature of the relationship between student athletic therapists and varsity athletes and the focus on goal setting are key strengths to fostering adherence to athletic injury rehabilitation in the current context.

References

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. doi: 10.1191/1478088706qp063oa
- Canadian Athletic Therapists Association. (n.d.). *Scope of practice*. Retrieved from <https://www.athletictherapy.org/en/about-athletic-therapy/scope-of-practice/>
- Cramer Roh, J. L., & Perna, F. M. (2000). Psychology/counseling: A universal competency in athletic training. *Journal of Athletic Training, 35*(4), 458-465.
- Cupal, D. D., & Brewer, B. W. (2001). Effects of relaxation and guided imagery on knee strength, reinjury anxiety, and pain following anterior cruciate ligament reconstruction. *Rehabilitation Psychology, 46*(1), 28-43. doi: 10.1037//0090-5550.46.1.28
- Driediger, M., Hall, C., & Callow, N. (2006). Imagery use by injured athletes: A qualitative analysis. *Journal of Sports Sciences, 24*(3), 261-272. doi: 10.1080/02640410500128221
- Evans, L., & Hardy, L. (2002). Injury rehabilitation: A goal-setting intervention study. *Research Quarterly for Exercise and Sport, 73*(3), 310-319. doi: 10.1080/0271367.2002.10609025
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology, 50*(5), 992-1003.
- Giorgi, A., & Giorgi, B. (2008). Phenomenology. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (2nd ed., pp. 26-80). Thousand Oaks, CA: SAGE.
- Gordon, S., Milios, D., & Grove, J. (1992). Psychological adjustment to sport injuries: Implications for therapists and trainers. *Sports Health, 10*(2), 13-15.
- Granito, V. J., Hogan, J. B., & Varnum, L. K. (1995). The performance enhancement group program: Integrating sport psychology and rehabilitation. *Journal of Athletic Training, 30*(4), 328-331.
- Granquist, M. D., Gill, D. L., & Appaneal, R. N. (2010). Development of measure of rehabilitation adherence for athletic training. *Journal of Sport Rehabilitation, 19*(30), 249-267.

- Guba, E. G. (1978). Toward a methodology of naturalistic inquiry in educational evaluation. *CSE monograph series in evaluation No. 8*. Los Angeles, CA: Center for the Study of evaluation, UCLA.
- Hamson-Utley, J. J., Martin, S., & Walters, J. (2008). Athletic trainers' and physical therapists' perceptions of the effectiveness of psychological skills within sports injury rehabilitation programs. *Journal of Athletic Training, 43*(3), 258-264. doi: 10.4084/1062-6050-43.3.258
- Hergendoeder, A. C. (1998). Prevention of sports injuries. *Pediatrics, 101*(6), 1057-1063. doi: 10.1542/pds10161057
- Inquirium. (2005). *InqScribe* [computer software]. Available from <http://www.inqscribe.com/>
- Levy, A. R., Polman, C. J., & Clough, P. J. (2008). Adherence to sport injury rehabilitation programs: An integrated psycho-social approach. *Scandinavian Journal of Medicine & Science in Sports, 18*(6), 798-809. doi: 10.1111/j.1600-0838.2007.00704.x
- Levy, A. R., Polman, C. J., Clough, P. J., Marchant, D. C., & Earle, K. (2006). Mental toughness as a determinant of beliefs, pain, and adherence in sport injury rehabilitation. *Journal of Sport Rehabilitation, 15*, 246-254.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbery Park, CA: SAGE.
- Meichenbaum, D., & Turk, D. C. (1987). *Facilitating treatment adherence: A practitioner's guidebook*. New York, NY: Plenum Press.
- Merriam, S. B. (2002). *Qualitative research in practice: Examples for discussion and analysis*. San Francisco, CA: Jossey-Bass.
- Milne, M., Hall, C., & Forwell, L. (2005). Self-efficacy, imagery use, and adherence to rehabilitation by injured athletes. *Journal of Sport Rehabilitation, 14*(2), 150-168.
- Patton, M. Q. (2002) *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: SAGE.
- Robbins, J. E., & Rosenfelt, L. B. (2001). Athletes' perceptions of social support provided by their head coach, assistant coach, and athletic trainer, pre-injury and during rehabilitation. *Journal of Sport Behaviour, 24*(3), 277-297.
- SMARTRISK. (2009). The economic burden of injury in Canada. Toronto, ON: SMARTRISK. [ISBN 1-894828-50-X]
- Sordoni, C., Hall, C., & Forwell, L. (2000). The use of imagery by athletes during injury rehabilitation. *Journal of Sport Rehabilitation, 9*(3), 329-338.
- Stiller-Ostrowski, J. L., Gould, D. R., & Covassin, T. (2009). An evaluation of educational intervention in psychology of injury for athletic training students. *Journal of Athletic Training, 44*(5), 482-489. doi: 10.4085/1062-6050-44.5.482
- Theodorakis, Y., Malliou, P., Papaioannou, A., Beneca, A., & Filactakidou, A. (1996). The effects of personal goals, self-efficacy and self-satisfaction on injury rehabilitation. *Journal of Sports Rehabilitation, 5*(3), 214-223.
- Tracey, J. (2003). The emotional response to the injury and rehabilitation process. *Journal of Applied Sport Psychology, 15*(4), 279-293. doi: 10.1080/714044197
- Washington-Lofgren, L., Westerman, B. J., Sullivan, P. A., & Nashman, H. W. (2004). The role of athletic trainer in the post-injury psychological recovery of collegiate athletes. *International Sports Journal, 8*, 94-104.
- Wesch, N., Hall, C., Prapavessis, H., Maddison, R., Bassett, S., Foley, L., Brooks, S., & Forwell, L. (2011). Self-efficacy, imagery use, and adherence during injury rehabilitation. *Scandinavian Journal of Medicine and Science in Sports, 22*(5), 695-703. doi: 10.1111/j.1600-0838.2011.01304.x

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