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Certified Athletic Trainer's Perceived Comfort Level with Shoulder Reductions

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ABSTRACT

Joint dislocations are a common injury in the athletic world. The shoulder is the most commonly dislocated joint. It is important for health care professionals to be aware of this injury and be able to treat it. Certified athletic trainers play a big role in the immediate care of injured athletes. This study will investigate the perceived comfort level of certified athletic trainers with reducing a shoulder dislocation. The study will include an online survey, which will be sent to ATC's in District IV of the National Athletic Trainer's Association. The survey includes both qualitative and quantitative data. This study is important to the profession because it provides proof that certified athletic trainers are reducing shoulder dislocations in the field.

INTRODUCTION

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This study addressed several different factors that influence the ability and willingness of certified athletic trainers to reduce a shoulder dislocation. The study distinguishes the ATC's attitudes toward shoulder reductions, where shoulder reductions are taking place, who is reducing shoulder dislocations, and where ATC's are receiving their training for shoulder reductions. Much research has been done on shoulder dislocations and the techniques to reduce them, but there is minimal research that proves that ATC's are actually reducing shoulder dislocations. The research question the study evaluated was, "What is the perceived comfort level of athletic trainers in reducing a shoulder dislocation?" One of the purposes of the study was to observe factors that that influence an ATC's comfort level with reducing a shoulder dislocation. These factors could be either extrinsic or intrinsic. Extrinsic factors include lawfulness and support by the team physician. This refers to whether or not shoulder reductions are on the ATC's list of standard operating procedures. The intrinsic factors that were assessed included level of education and training. Training refers to where they learned the reduction technique (Figure 3 & 4). Some potential answers included undergraduate or graduate studies, formal or informal instruction with the team physician, on-the-job training, and personal experience. The hypothesis for this study was that ATC's in the collegiate and professional setting would have a greater perceived comfort level with reducing a shoulder dislocation than ATC's working in a high school or clinic setting. Also, it was predicted that ATC's with more years of clinical experience would have a greater perceived comfort level.

PURPOSE

The purpose of this study was three-fold. The purpose revolved around determining who is actually performing glenohumeral reductions, what factors influence their decision to reduce a dislocation, and if ATC's believe they should be performing reductions.

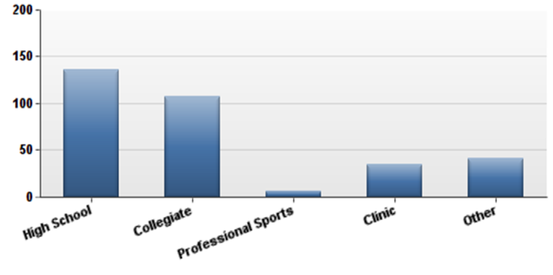


Figure 1. ATCs by setting.

METHODS

This study was done via an online survey on Qualtrics.com. The survey included demographic information, and both qualitative and quantitative data (see Survey). The qualitative questions focused on open-ended questions that asked about previous experiences with shoulder dislocations and their personal opinions on the issue. The quantitative section asked questions pertaining to what state and clinical setting they currently practice in (Figures 1 &2). Participants were Certified Athletic Trainers recruited from District IV of the National Athletic Trainer's Association. The participants were recruited from all settings, including high schools, professional and collegiate sports, and other nontraditional environments. The ATC's received an email asking them to participate in the study and a link to the actual survey on Qualtrics. A reminder email was also sent out three weeks after the original email. If they chose to proceed to Qualtrics, they were directed to the Informed Consent form. Before the participants proceeded to the actual survey, they were required to indicate that they understood the procedure and voluntarily consented to the study. After the participants chose to continue with the study, the survey was completed in one sitting and should not have taken more than 15 minutes.

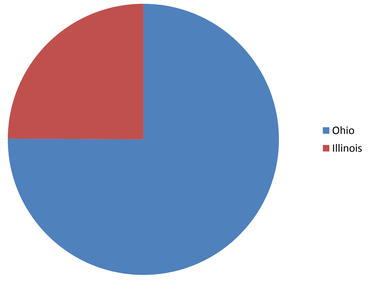
STATISTICAL ANALYSIS

Once the data had been collected, the data analysis was done separately for quantitative and qualitative questions. The quantitative data was analyzed using the Statistical Package for the Social Sciences (SPSS). Using SPSS, the data was analyzed using the ANOVA and Tukey Post Hoc tests. The p-value was set at .05. These tests compared both years of experience and current clinical setting to the comfort level of Certified Athletic Trainers in reducing anterior, posterior, and inferior dislocations. The qualitative data was analyzed for common themes and ideas.

RESULTS

The results showed that there was a significant difference between ATC's perceived comfort level in the 0-5 and 20+ years of experience groups when reducing posterior dislocations ($p=.016$). Another significant difference was shown between the ATC's in a collegiate and clinic setting ($p=.019$). These groups disagreed on whether or not ATC's in their setting should be permitted to reduce shoulder dislocations. The qualitative data was analyzed for common themes and ideas. The most common theme that emerged was that ATC's do not want to reduce shoulder dislocations due to potential liability. This finding was very evident in the high school setting. Another common theme that was identified included the belief that ATC's should be permitted to reduce chronic dislocations, but not acute, first-time dislocations. This belief was shown across all groups.

Figure 2. ATCs by state



DISCUSSION

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The purpose of this study was three-fold. The purpose revolved around determining who is actually performing glenohumeral reductions, what factors influence their decision to reduce a dislocation, and if ATC's believe they should be performing reductions. The results showed that Certified Athletic Trainers who have had only 0-5 years of experience were less comfortable with reducing posterior shoulder dislocations than the ATC's with 20+ years of experience. This is likely due to the lack of confidence that recent graduates often exhibit. The other significant difference that was found was between ATC's working in the collegiate and clinic setting. ATC's in the collegiate setting believed that they should be able to reduce shoulder dislocations with proper training, but ATC's in the clinic setting did not agree. This is likely due to the difference in patient population in each setting. It is unlikely that an ATC working in a clinic setting will have a patient who dislocates their shoulder for the first time; whereas an ATC in the collegiate setting will likely see a few dislocations every year. The risk of injury is much higher in a collegiate setting than in a clinic setting.

There is little to no research that states that Certified Athletic Trainers are reducing shoulder dislocations on the sideline. However, research does discuss several single-person techniques that could be utilized by an ATC on the sideline. Some examples of single-person techniques include the Milch technique, FARES, Eachempati, Stimson, Oxford Chair Technique (OCT), and the seated reduction technique (SRT). When asked about whether or not ATC's should be permitted to reduce shoulder dislocations, a few participants mentioned that the faster the injured athlete's pain could be relieved, the better. Some clinicians may argue that the injured athlete should be immediately referred to the hospital and receive medication to relive that pain. Research shows us that relaxation and communication between the clinician and patient may be better than medication. Certified Athletic Trainers are well known for their relationships with their athletes. It is common for an athlete to feel more comfortable with their ATC than with doctors and nurses in the Emergency Department. Because research shows that relaxation and communication are key factors in the ease of reduction, ATC's who have had proper training should be permitted to reduce a shoulder dislocation. Athletic trainers can and should play a prominent role in the immediate response to injuries. Therefore, if athletic trainers are comfortable with reducing a shoulder dislocation, it is important for them to know and be able to execute several different reduction techniques. All of these issues should be discussed with their team physician and be clearly laid out in their standard operating procedures.

A potential limitation to this study may include a lower response rate for certified athletic trainers in the professional sports setting and in non-traditional settings.

CONCLUSION

This study shows that Certified Athletic Trainers are performing shoulder reductions and that the more experience they gain, the more confident and comfortable they feel. In the future, this study could go on to investigate which reduction techniques are most commonly used by certified athletic trainers. Further research could also look at how physicians perceive the comfort level of athletic trainers with shoulder reductions.

SURVEY

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- Gender: Male, Female
- Years of Experience: 0-5, 5-10, 10-15, 15-20, 20+
- Clinical Setting: High School, Clinic, Collegiate, Professional, Other
- What state do currently you practice in?
-Are you aware of your Standard Operating Procedures (SOP's)?
- Do your standing orders permit you to reduce a dislocated shoulder: yes, no
- If your SOP's do not permit you to reduce a shoulder dislocation, why not?
- Are you dual credentialed? yes, no
- If yes, what are your credentials? PT, PA, MD, OT, DC, Other, Select all that apply
- Have you ever reduced a first-time shoulder dislocation? yes, no
- Have you ever reduced a chronic shoulder dislocation? yes, no
- How comfortable are you with reducing an anterior shoulder dislocation? Likert Scale
- How comfortable are you with reducing a posterior shoulder dislocation? Likert Scale
- How comfortable are you with reducing an inferior shoulder dislocation? Likert Scale
- How comfortable are you with reducing a superior shoulder dislocation? Likert Scale
- Do you believe that young professionals need more training in shoulder reductions?
- If you are not comfortable reducing a shoulder reduction, why?
- In one calendar year, estimate how many shoulder reductions you do.
- Where did you receive your training? Formal instruction with physician, informal teaching with physician, first-hand experience, on-the-job training, undergraduate studies, graduate studies, other, select all that apply,
- If you reduce a first time dislocation, do you want post-reduction images?
- Do you believe that athletic trainer's in your setting, should be allowed/trained to reduce shoulder dislocations?

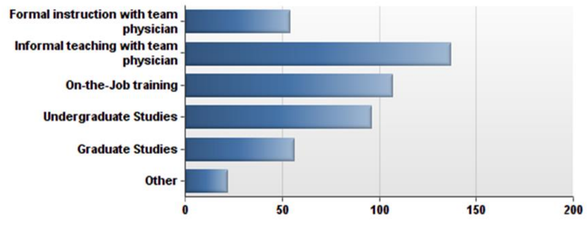

Figure 3. Method of training.

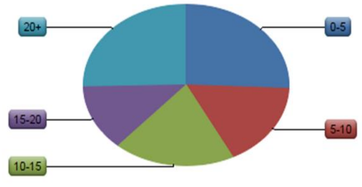

Figure 4. Years of experience.