

# The Effect of an Educational Intervention Regarding Athletic Mouth Guards

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## Background

- Sporting activities can lead to an increased risk of oral and facial injuries. Sports-related dental trauma was reported to cause 10-39% of all reported dental injuries amongst children<sup>1</sup>.
- Baseball players had the highest reported rates of traumatic dental injuries, specifically in the 7-to-12-year age group. 89% of ball-related facial injuries are suffered in the field<sup>5</sup>.
- Dental injuries can be reduced by the utilization of mandatory protective equipment. Mouth guards prevent player-object contact, which is common in baseball.
- The use of mouth guards are influenced by the attitudes of players, officials, coaches and parents.

## Objective/Purpose

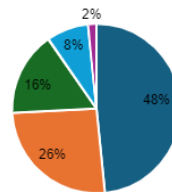
The aim of this study was to assess the effectiveness of an educational intervention regarding the use of athletic mouth guards in youth baseball.

## Methods

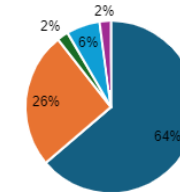
- An educational module was created to provide information on dental trauma, specifically in youth baseball, and athletic mouth guards.
- A pre-survey and post-survey were created in accordance with the e-module and included Likert Scales responses.
- The e-module and surveys were sent via email to second year dental students in the PEDI696 course at UNMC by the course director.
- Descriptive statistics (means, standard deviation, median, IQR, minimum, maximum, count and percentages) were used to summarize data.
- The paired t-test was used to compare pre and post survey responses to the following survey questions:
  - Mouth guards should be required for baseball players at all games.
  - Mouth guards should be required for baseball players at all times, including practice.
- Analysis was completed using SAS Version 9.4.
- A p-value of < 0.05 was considered statistically significant.

## Results

Pre Survey - Mouth guards should be required for players at all games.



Post Survey - Mouth guards should be required for players at all games.



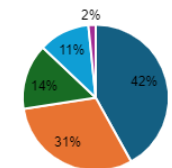
Mean change in response: 0.59



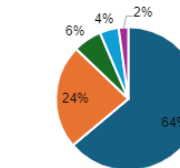
P = 0.0117

Strongly Agree Agree Neutral Disagree Strongly Disagree Strongly Agree Agree Neutral Disagree Strongly Disagree

Pre Survey - Mouth guards should be required for players at all times, including practice.



Post Survey - Mouth guards should be required for players at all times, including practice..



Mean change in response: 0.67



P = 0.0058

Strongly Agree Agree Neutral Disagree Strongly Disagree Strongly Agree Agree Neutral Disagree Strongly Disagree

- 53.2% of participants revealed they personally know someone who has been affected by a traumatic dental injury.
- 74.2% of participants responded that they had not received education regarding the use of athletic mouth guards in youth baseball

## Discussion

- There is a statistically significant difference in the mean responses to each of the statements between the pre-survey and post-survey. The e-module was successful in positively shifting opinions.
- Respondents had a positive shift in opinion regarding the use of mouth guards not only at youth baseball games but also at practice. This is important, as a majority of injuries have been reported to occur in the field.
- This study could be further investigated by providing an educational module to other groups of individuals involved in youth baseball, including coaches, officials, and parents of the players.

## Conclusion

An educational module was effective in positively changing second year dental students' opinions regarding the protective benefits of athletic mouth guards in youth baseball.

## References

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