

Parental Awareness Regarding Mouthguard Use for Sports Related Injury Prevention

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Purpose

The objective of this study was to assess parental awareness and knowledge as well as any perceived barriers about the use of mouthguards for sports related injury prevention for their children 7-12 years old at BronxCare Health System Pediatric Dental Clinic.

Introduction

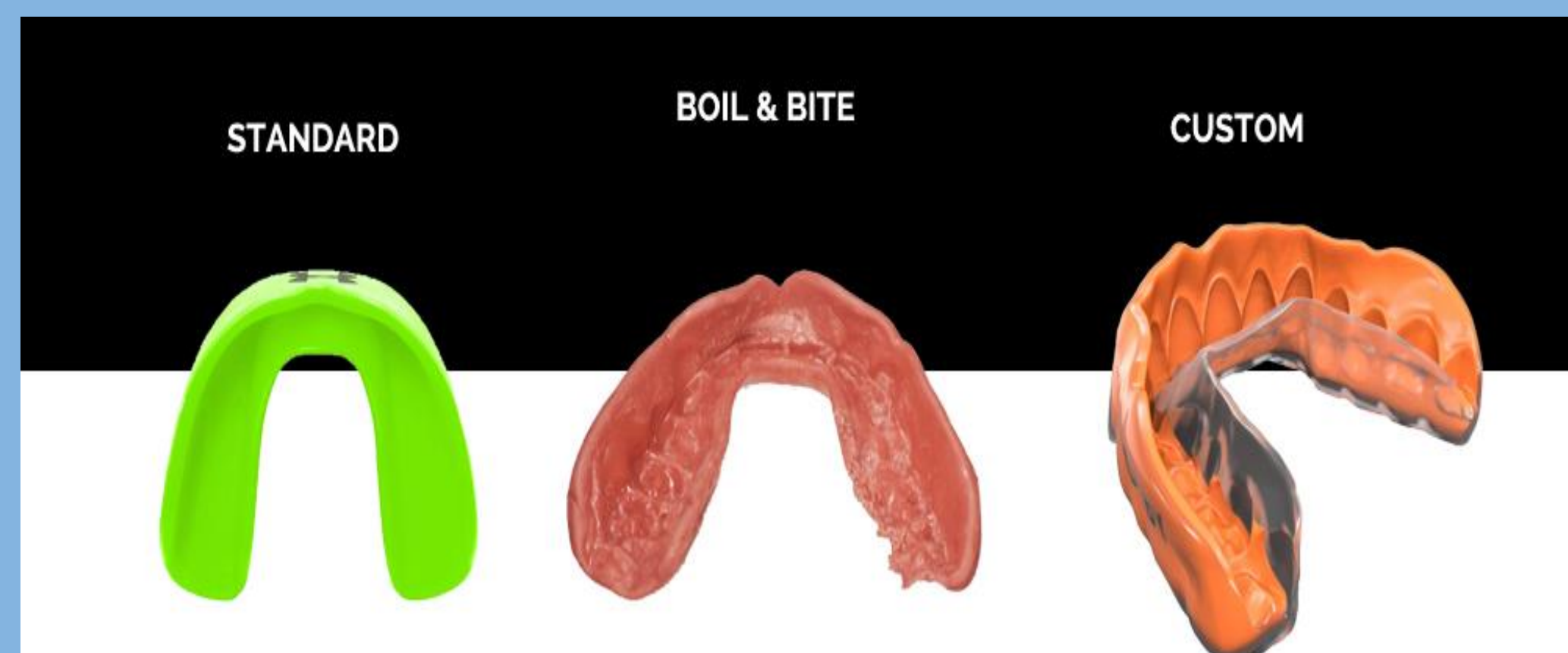
- Children are most susceptible to oral injuries in permanent dentition between the ages of 7 and 11 years old and such injuries often involve teeth with incomplete root formation.¹
- Orofacial injuries can result in abnormality of primary teeth exfoliation, development of an infection with resultant tooth loss, disruption in timing of eruption of the permanent teeth, and possible permanent teeth defects.²
- Mouthguards are hypothesized to reduce the likelihood of orofacial injuries and concussions through several mechanisms.^{3,4}

Mechanisms of mouthguards' action:

1. During direct forceful horizontal impact to the mouth, mouthguards may prevent fracture or dislocation of the teeth by separating the mandibular and maxillary teeth and absorbing or redistributing the impact forces over a broader area.
2. During traumatic jaw closures (vertical impacts), mouthguards may protect against mandibular bone fractures by stabilizing the mandible and absorbing the impact force.
3. Mouthguards may reduce laceration and bruising of soft tissues by separating the teeth from the soft tissues, thus inserting a protective layer between hard and soft tissues.

Classification of mouthguards

- Type I – Custom mouthguard
- Type II – Boil and bite
- Type III – Stock mouthguards



Methods

- Parents or legal guardians of children 7 to 12 years old being treated at BronxCare Health System Pediatric Dental Clinic were asked to complete a questionnaire during their child's dental visit.
- Survey was administered in the form of anonymous multiple-choice questionnaire.
- Questionnaire was provided in English and Spanish languages.
- Questionnaire comprised of 15 questions assessing:
 - Parental demographics
 - Parental literacy level
 - Type of sport played by the child
 - Patient age and history of mouthguard use
 - Parental awareness of mouthguards
 - Parental attitude toward mouthguard use

Results

- A total of 254 questionnaires were collected.
- More than 75% of the parents who brought their children to the dental appointment were females.
- Most of the parents were between 20-40 years old.
- More than 40 % of participating parents reported high school as the highest level of education.
- Majority of participating parents were not aware about the mouthguards, their use nor different types.
- The most reported played sport was basketball.
- Majority of parents of patients who play sports reported their children did not use mouthguards while playing (97%).

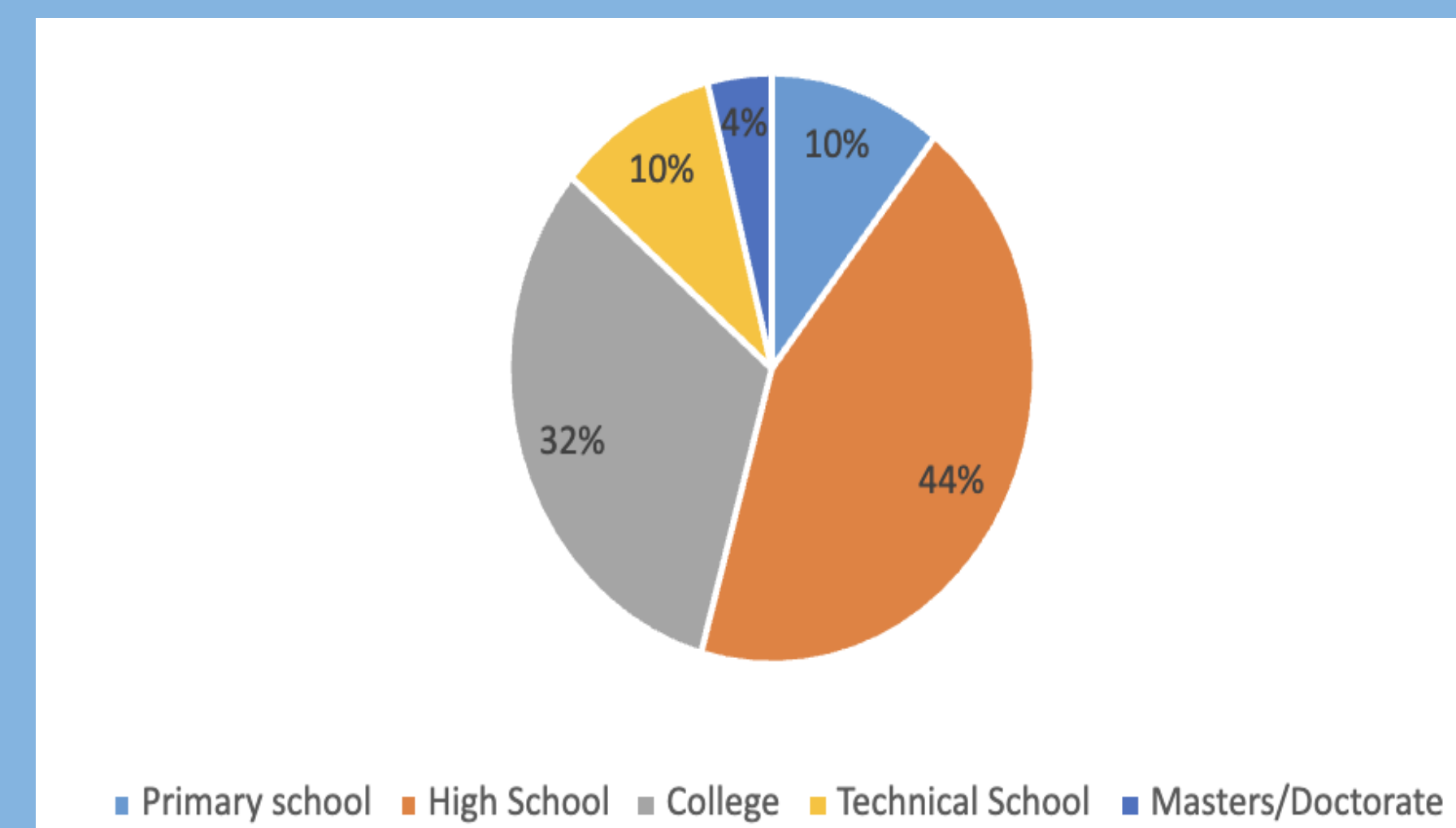


Fig 1: Reported parental education level

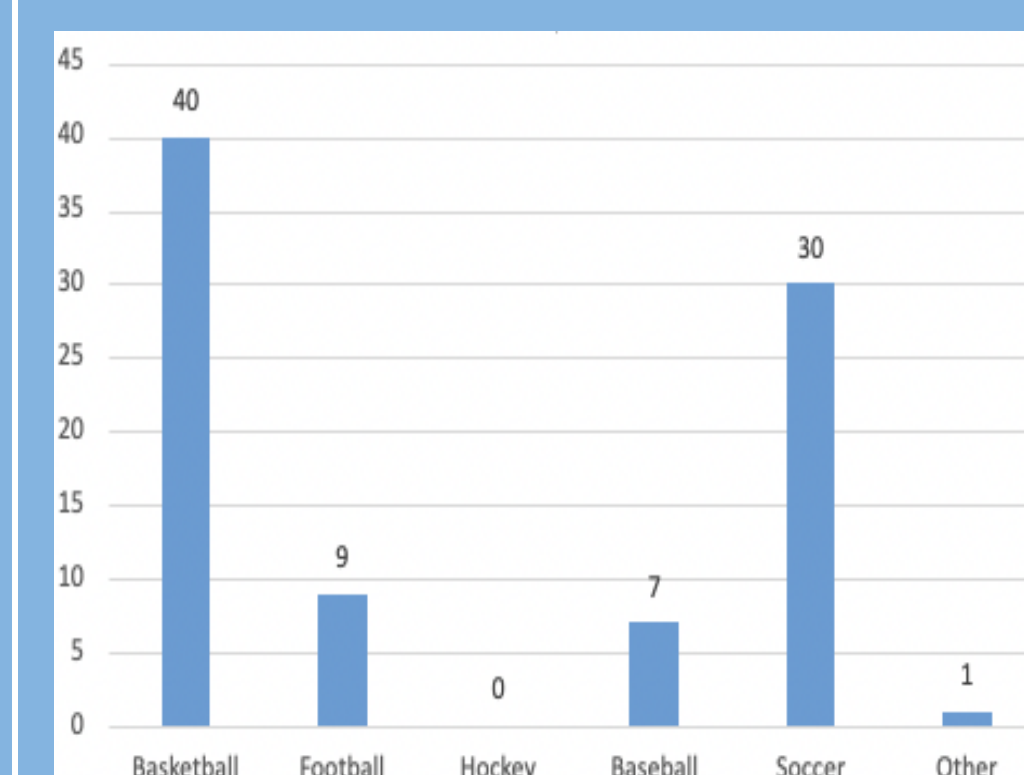


Fig 2: Type of Sport Played

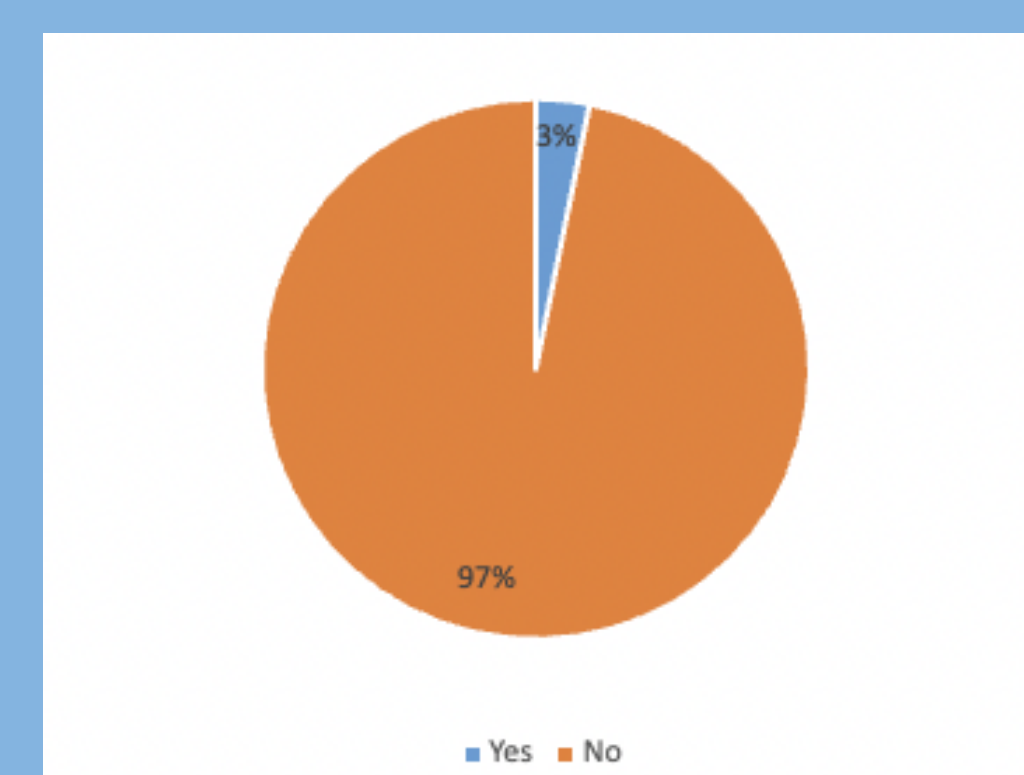


Fig 3: Reported mouthguard use

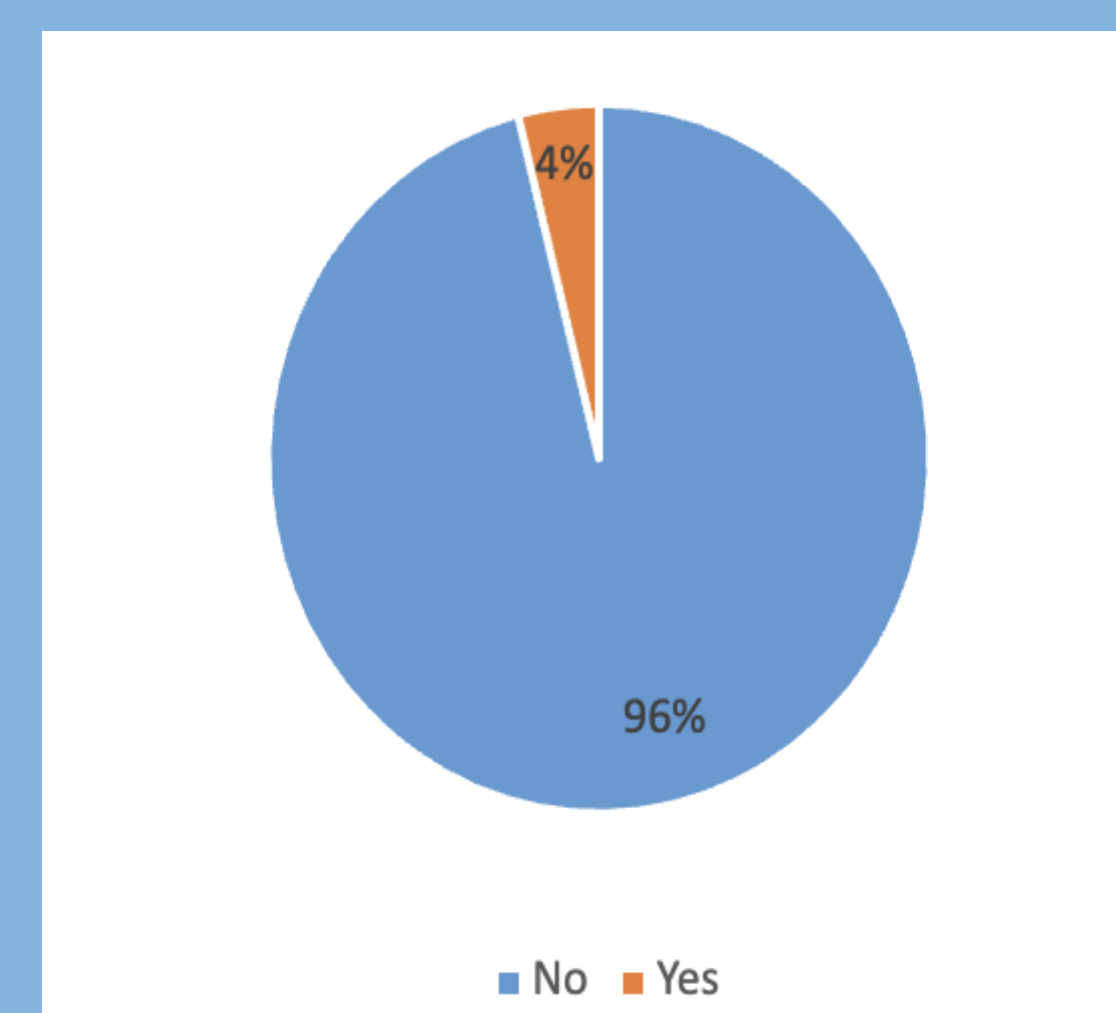


Fig 4: Mouthguard awareness

Discussion

- Small sample size might not appropriately reflect population's knowledge regarding mouthguards and their use.
- Further research would be beneficial to examine possible reasons behind parents' lack of knowledge regarding mouthguards' use and their role in prevention of sports related injuries.
- The researchers anticipated to increase the awareness and knowledge regarding the importance of mouthguard use to prevent sports related injuries among the parents of pediatric dental patients at BronxCare Health System.

Conclusion

- The American Academy of Pediatric Dentistry and American Dental Association recommend that all children and youth wear mouthguards while participating in any organized sports activities, especially when playing contact sports.
- This study shows that reported awareness regarding mouthguards and their role in preventing sports related injuries is low among the parents of pediatric dental patients at BronxCare Health System.

References

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