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Association between BMI and cheerleading injuries in Singapore**Jade Nicolette Chee Zhenhui**

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Introduction & Aim: Cheerleading injuries in the United States have been increasing steadily over the past few decades. Studies have reported that more days were lost per injury in cheerleading compared to any other sport. In this study, we aim to study our local varsity cheerleading population for any association between gender and BMI of cheerleaders and injuries sustained.

Methods: 5 teams across polytechnic, university and open teams participated in the 2017 National Cheerleading Championships in Singapore. The coaches of all 5 teams were contacted and willing participants consisting of both current and retired cheerleaders were recruited. Demographic information on gender, current age and BMI was collected. Specific questions pertaining to the mechanism of injury as well as body part injured were evaluated.

Results: Males were more likely to be injured while tumbling ($p=0.018$) and basing ($p=0.025$), while females were more likely to sustain injuries resulting from falls from stunts ($p<0.001$). The BMI was significantly smaller for cheerleaders who suffered injuries resulting from falls from stunts compared to those who did not ($p=0.001$). On the other hand, cheerleaders who suffered basing and collision injuries had significantly larger BMIs ($p=0.015$ for basing injuries and $p=0.029$ for collision injuries). There were no statistically significant associations between gender and body part injured or BMI and body part injured.

Conclusion: A higher BMI is related to injuries sustained while basing and in collisions, while a smaller BMI is significant in cheerleaders who were injured from falling from stunts. This emphasizes the importance of a varied training program tailored to suit the demands of the cheerleader specific to his/her position on the team. Cheerleaders involved in basing should be advised on maintenance of a lower BMI, while those participating as flyers in a stunt should maintain a higher BMI.

Recommendations: We hope that by identifying the relationship between BMI and the prevalence of cheerleading injuries sustained, as are better able to tailor training programs targeted for participants in the sport involved in specific roles on the team, so as to decrease the overall incidence of cheerleading injuries in Singapore.

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