

## Relative age effect in U-16 Asian Championship Soccer Tournament

### ABSTRACT

Athletes born at the beginning of the year may present advantages in terms of physical characteristics, motor ability or cognitive knowledge that could increase their chances for selection against their peers. This circumstance could lead to the over-representation of older athletes in an age-defined competition, a phenomenon commonly referred to as relative age effect (RAE). Although, a number of studies have demonstrated that RAE is apparent in youth soccer, such studies rarely investigate the performance advantage that likely exists across the birth month of the athletes. The current study aims to determine the presence of RAE in the under 16 Asian Football Confederation Championship (AFC); investigate the effect of RAE on the team qualification success; as well as ascertain the existence of RAE in choice of playing position amongst the soccer players. Data for the 2018 AFC under 16 qualifications matches were obtained from the AFC. A total of 719 players from 32 countries participated in the qualification competitions. Chi-square for goodness fit is used to determine the existence of the RAE across the players' month of birth while logistic regression is applied to analyze the differences of the quartiles' distribution with respect to the quartile, qualification status (qualifier or non-qualifier) as well as the playing position of the players. The results demonstrate the presence of RAE in the AFC under 16 soccer tournaments [ $\chi^2(4) = 21.53$ ;  $p < 0.001$ ] with the largest number of older players dominating the qualified team. Likewise, a substantial difference is observed with regards to the quartile and various playing positions of the players at  $p < 0.05$ .