

Weekly Training and Competitive Load of Junior Level Community Cricket Players

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ABSTRACT

Purpose: Understanding the participation habits of junior cricket players is needed to better inform injury prevention strategies in this sporting population. This investigation sought to describe the amount of training and competition undertaken by junior community level cricket players in a typical week.

Materials and methods: A cross-sectional survey with a 1 week recall was administered to 281 Australian junior community club cricket players aged 9 to 16 years. The number of training and competitive matches in the previous week and the number of contexts competed or trained in during that same week were determined.

Results: The majority of the surveyed cricketers participated in ≥ 1 match during the previous week, with 10% reporting having participated in ≥ 2 matches. More players from the under 16 years (U16) level others competed in ≥ 2 matches in the previous week. Coinciding with the greater number of weekly participations in the older age group, 49% (CI: 9–60) of the U16 players reported also taking part in ≥ 2 training sessions in the previous week. Overall, more players aged under 12 years (U12) (46%; CI: 31.6–57.6) reported not attending any cricket training in the previous week, than did older age groups (7% each). Moreover, 28% of U16 players reported also competing in an adult competition.

Conclusion: Older players had greater training and competitive loads than younger players. The number of competitive contexts across which junior players compete also increased with age. There is potential for heightened injury risk when training and match loads get too high, especially across playing contexts.

Keywords: Competitive load, Junior cricket, Sports participation.

How to cite this article: Talpey SW, Siesmaa E, White P, Finch CF. Weekly Training and Competitive Load of Junior Level Community Cricket Players. *J Postgrad Med Edu Res* 2015;49(4): 164-167.

Source of support: Nil

Conflict of interest: None

INTRODUCTION

In Australia, almost half (48%) of the total cricket playing population are junior participants.¹ Unfortunately, there is a lack of research to characterize this sporting population. In terms of participation habits, this limits what clubs, coaches, parents and players can do to create a culture that is effective for developing skill whilst ensuring player safety. In sport, exposure to training and competition poses a necessary stimulus to develop skills and improve the health of its participants.² However, if the volume and intensity of this exposure is excessive then the positive benefits of sporting participation can be negated by injury.²

In cricket, much research emphasis has been placed on the monitoring of training and competitive loads of elite senior players, with particular focus paid to fast bowlers.³ Although, the majority of injuries in senior cricket occur within a competitive context with minimal injuries occurring during training,^{4,5} in junior cricket the injury rates in both training and competition are similar.⁶ Moreover, unlike the senior and professional forms of the game, injuries in junior cricketers are common across all playing positions.⁷ Apart from a study that monitored the number of balls bowled by junior fast bowlers during training and competition³ no study has reported the participation habits of junior cricket participants.

Sport participation at the junior level is not always limited to club-based training sessions and matches.⁸ For example, a young cricket player could also train and compete for their club, their school, a representative team and possibly for older sides within their club. This presents a problematic scenario for the prevention of injuries, because a given junior cricketer's training and competition behaviors will be dictated by several different coaches who may not necessarily communicate with each other to ensure that the specific player is coping with their training and competitive load. This scenario could become increasingly perilous if a young cricket player has been identified as talented, as they may desire to undertake as much training and competition to improve and expose themselves to talent identifiers, not being cognisant of the injury risks associated with excessive training and competition.⁸

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In community sport, coaches are the drivers and facilitators of safe and effective sporting environments.⁹ Coaches need to be aware of all potential risk factors for injury including players who concomitantly compete and train for several teams. Therefore, the purpose of this paper is to quantify the amount of training and competition undertaken by junior community level cricketers in a typical week.

MATERIALS AND METHODS

Of the 281 participants recruited for participation in the investigation, all (100%) completed the survey. Data were collected as part of the juniors enjoying cricket safely (JECS) study, conducted in a large Australian regional cricket association.⁷ The main aim of the JECS study was to investigate injury occurrences during training and games, over the course of one cricket season. All clubs within the league were invited to participate and to nominate junior teams playing within the 12 years and under (U12), 14 years and under (U14) and 16 years and under (U16) competitions to take part. Players from the nominated teams were individually invited to participate in the study with parental consent.

Survey Administration

Cricketers completed the previously validated self-report survey¹⁰ during one of their scheduled training sessions. Most cricketers took approximately 25 minutes to complete the survey with researchers, coaches and parents available to provide assistance if needed. The survey questions specific to this paper required players to report on how many cricket matches and training sessions they had participated in during the previous week. Players completed a table to indicate the number of matches and training sessions they participated in for a club team, a school team, a rep team and/or another team. They also indicated what age group they played the games in for each team.

DATA ANALYSIS

Data were double entered into Microsoft Excel, cleaned and transferred into PASW 18.0 for analysis. Chi-squared analyses were conducted to identify associations between age groups and children's participation habits for matches and training in the week prior to survey administration.

RESULTS

The mean age of the 281 surveyed cricketers was 12.7 years with a range of 9 to 16 years. All but five cricketers were

male (98.2%). The mean number of years of cricket involvement was 3.2, with almost one quarter of respondents reporting having played for 2 years. Few children (n = 11, 3.9%) reported being involved in cricket for ≥ 8 years.

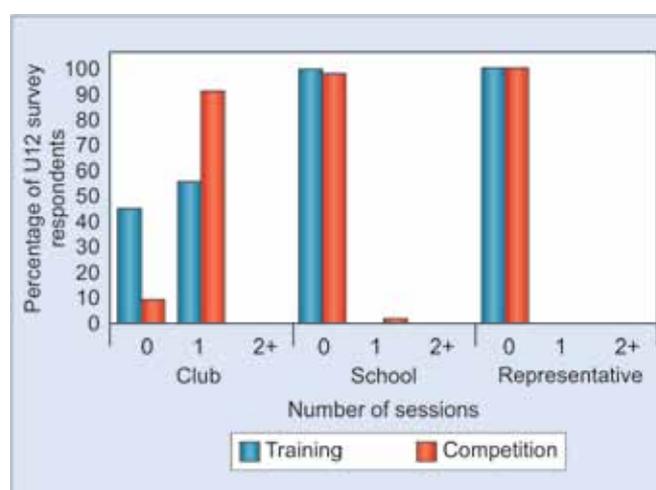
The majority of the surveyed cricketers participated in ≥ 1 match during the previous week, with, 10% (n = 28) reporting having participated in >2 matches. The U16 players were significantly more likely than the U12 and U14 players to have reported competing in >2 matches a week. The U12 players were less likely to report attending and any cricket training in the previous week compared to the older age groups. Additionally, U14 and U16 cricketers reported competing and training across three separate competitive contexts: club, school and representative. Additionally, 28% of U16 players reported playing for their clubs senior side in the previous week. However, no players from the U12 or U14 reported playing for an older age group during the previous week.

Coinciding with the greater number of weekly participations in the older age group, 49.4%, (95% CI: 38.8–60.0) of U16 players reported also taking part in ≥ 2 training sessions in the previous week. Significantly ($p < 0.05$) more U12 players (46%, CI: 31.6–57.6) reported not attending any cricket training in the previous week, than did under 14 (7.1%) and U16 (7.2%) players.

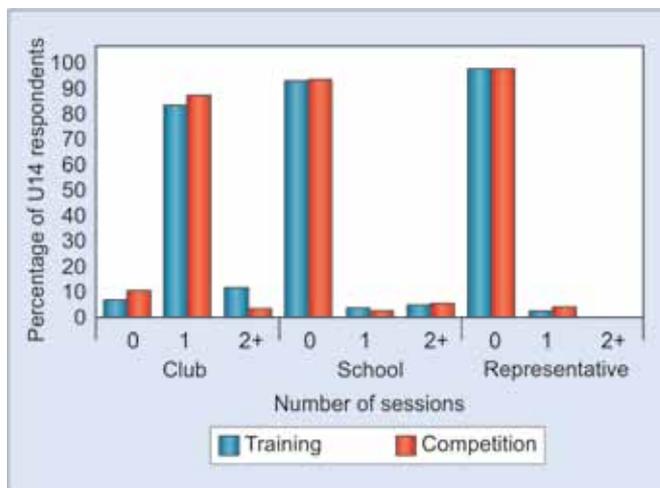
Similar to competition, cricketers also trained across three competitive contexts: club, school and representative. Graphs 1 to 3 display the percentage of junior players from each age category and the amount of training and competitive matches undertaken in each context in the week prior to the survey.

DISCUSSION

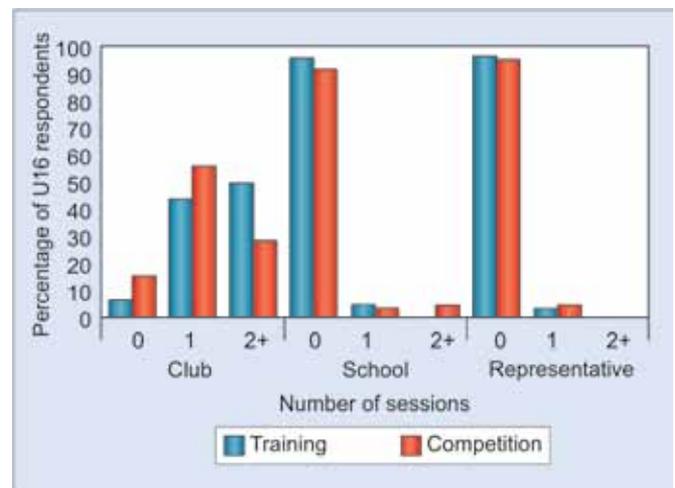
This study is the first to report the training and competition habits of junior community cricket players. In most cases,



Graph 1: Percentage of U12 players and the number of training and competitions undertaken during the previous week in each context of their cricket activity (n = 57)



Graph 2: Percentage of U14 players and the number of training and competitions undertaken during the week in each context of their cricket activity (n = 160)



Graph 3: Percentage of U16 players and the number of training and competitions undertaken during the week in each context of their cricket activity (n = 84). Note: 28% of U16 players also reported competing for their clubs senior side in the previous week

cricketers played one match per week; however, the number of competitions undertaken in a week increased for the U16 players. With regards to weekly training habits, most cricketers completed 0 to 2 sessions with no U12 players reporting completing >1. In fact, 46% of U12 players reported not attending any training in the previous week. The amount of weekly training increased with age level of play with 7.9% of U12 and 15.3% of U14 reported undertaking >2 training sessions in the previous week.

A key finding was that it was not uncommon for players to compete and train across several contexts (e.g. school, representative and a senior team) on top of the commitments to their junior club within the one week. If young players are competing across contexts communication between coaches to help balance training and recovery is necessary for player safety. Competing across several club and scholastic based competition was recently highlighted as a potential risk factor for South African junior cricketers.⁶ In the sport of baseball, which possess similar physical demands to cricket, competing for several different teams has been shown to be a significant risk factor for shoulder and elbow injuries in adolescent players.¹¹ In fact, the USA Baseball Medical and Safety Advisory Committee has made limiting participation to 1 team per season a key recommendation for injury prevention in junior baseball players.¹² Future injury prevention research in junior cricket should combine the monitoring of training and competition load across all competitive contexts with high quality injury surveillance data to determine if there is a relationship between injury and players competing across several contexts.

The finding that some U16 players reported competing in senior community level cricket in the week prior to survey also highlights another potential injury risk for

junior cricket players. In junior sport, coaches often encourage the more motivated players to compete against older counterparts as a way of exposing them to a higher level of competition to ultimately improve their technical and tactical performance. For example, a young fast bowler who is neither technically or tactically efficient can have performance success against players of the same age by relying solely on their superior physical qualities, such as strength and power. However, when that same player is competing against older players with more developed physical qualities, they must then maximize their technical and tactical aspects of performance to have success.

Another finding with implications for player safety was that 45% of the U12 players attended no training in the week prior to the survey, yet 88% of them competed in a game. This also holds substantial implications for skill development and injury prevention. If not attending training, the young player is presented with fewer opportunities to develop skills, such as catching and batting. This lack of skill development could potentially leave them more susceptible to injury.⁷

A limitation of the current investigation is that the survey only asked participants about the amount of training and competition undertaken in the previous week. It is possible that the amount of training and competition undertaken could vary week to week depending on timing within the season. Another limitation is that since the survey was only administered during one training session, only the participation load of those players who attended training was able to be collected.

Training and competing are necessary for sporting participants to improve their skills and obtain the health benefits associated with safe participation. As expected, as junior cricketers progress through age-level competitions the volume of the training and competing they undertake



increases. However, the increase in the number of contexts across which junior cricketers compete could present an increased injury risk if communication between coaches, players and parents does not occur. Future studies need to investigate the link between competing across different contexts and injury in junior cricket to help to inform injury prevention and coaching strategies specific for this sporting population. Coaches of junior cricketers should be cognisant of how often and, in what contexts, their players are competing and training. It is recommended that coaches communicate frequently with players, parents and other coaches to monitor how well junior players are coping with sporting participation to ensure that excessive training and game loads are not placed on them.

ACKNOWLEDGMENTS

This study was funded through the Injury Prevention Community Grants Program of the Australian Government Department of Health and Ageing. Caroline F Finch was supported by an NHMRC Principal Research Fellowship (ID: 1058737). The study would not have been possible without the active involvement of clubs, teams and players from the Cricket Association.

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