

Why Santa should bring your kids the right-sized sports gear

December 23 2014, by Tim Buszard



Small hands need small sporting equipment ... but what about less bouncy balls?
Credit: PJMixer/Flickr, CC BY-NC-ND

Smaller footballs, lighter tennis racquets and mini playing fields: it makes sense to have these for children, right?

Well, in recent years there's been strong opposition against [children](#) playing modified sport, particularly in American tennis.

Wayne Bryan (father of US doubles champions the Bryan brothers) wrote a [scathing letter](#) in 2012 to the United States Tennis Association (USTA) outlining his reasons why children, particularly skilled children, should not be forced to play tennis with low compression balls (among other topics).

This was in response to a [rule change](#) which mandated that all under-10 tournaments use low compression balls – only the third rule change in USTA history.

Low compression balls are softer than standard tennis balls, don't bounce as high and tend to travel slower, so are easier to hit.

Bryan argued that forcing children to play the modified game would stunt the development and progression of skilled children. Nonetheless, there is strong scientific evidence in support of modifying sporting equipment for children. Let's go through the four main reasons for doing so.

1. Enjoying sport

Modified sport allows children to enjoy success with the task, leading to [increased engagement](#) and enjoyment. Simply, children are more competent when using modified equipment and this likely leads to sustained participation.

Needless to say, a number of health benefits are inextricably linked with continual physical activity throughout childhood and adolescence.

2. Getting good

[Research](#) in tennis shows that children get more practice opportunities

when playing with lower compression balls and on smaller courts. The softer balls and smaller courts appear to allow children to "rally" with an opponent with greater control.

Modified sport also allows children to perform skills in a similar manner to adults, particularly with respect to movement and perception. A child shooting a basketball to a lower net provides similar perceptual information as an adult shooting to a standard net height. This "perception-action" coupling is considered critical to skill acquisition.

Even highly skilled children (such as the best under-10 tennis players in Australia) [had improved playing performances](#) when using low compression balls instead of standard [tennis](#) balls.

3. Staying uninjured

Children display better movement patterns when playing modified sport. Importantly, this is likely to reduce the risk of injury.

The technique of junior fast bowlers in cricket is considered by sports biomechanists to make them less prone to lower back injuries when bowling on shorter pitches. Specifically, under-11 and under-13 children bowled with less shoulder counter-rotation when the pitch was 2m shorter than a full-size pitch. It's a good example of how manipulating a task – in this case, length of bowling – can change movement patterns and effectively minimise injury risk.

4. Learning the ropes

Simplifying sporting skills by modifying equipment can encourage implicit motor learning – that is, learning via unconscious processes. A [recent study](#) found that young children have difficulty multi-tasking

when using full size equipment as against scaled equipment.

It appears that equipment that increases skill difficulty (such as adult equipment) places unnecessary demands on a child's mind, which can have a negative impact on learning.

The take-home message from the research is that sports organisations should continue to promote and develop junior modified programs, such as Auskick, Milo Cricket and Hot Shots Tennis. More than likely our future sporting champions are currently embedded within these programs.

Indeed, if sports equipment appears under the Christmas tree for your children this year, I hope Santa remembers to make sure it is the right size for them!

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