



Small Sided Games

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“Small sided games are commonly used by coaches to develop the technical abilities of soccer players and are increasingly being used for aerobic fitness development”

Stephen V.Hill-Hass, Brian T Dawson, Aaron J. Coutts & Greg J. Roswell (2009). Physiological responses and time motion characteristics of various small sided soccer games in youth players.

School of sports science, University of Western Australia, Perth

Small sided games

- Research into small sided games is patchy
- Inconsistent rules, formats and team sizes
- Difficult to identify players
- What should we look for?
- Levels of physical activity?
- Ball in play %?
- Ball contacts per player?



Lower Island Soccer Association

- Southern portion of Vancouver Island
- 10 clubs
- Approx. 7800 players
- Approx. 660 coaches
- Mandate coach certification by summer 2015
- High Performance to grassroots



Study method

- Not scientific- Weekend life is not a lab
- Boys and girls data together
- Ball in play- manual with two stopwatches
- Physical activity-Accelerometers
- Ball contacts manually recorded- tick sheets
- To provide a general picture of what happens in U8-U9 soccer games

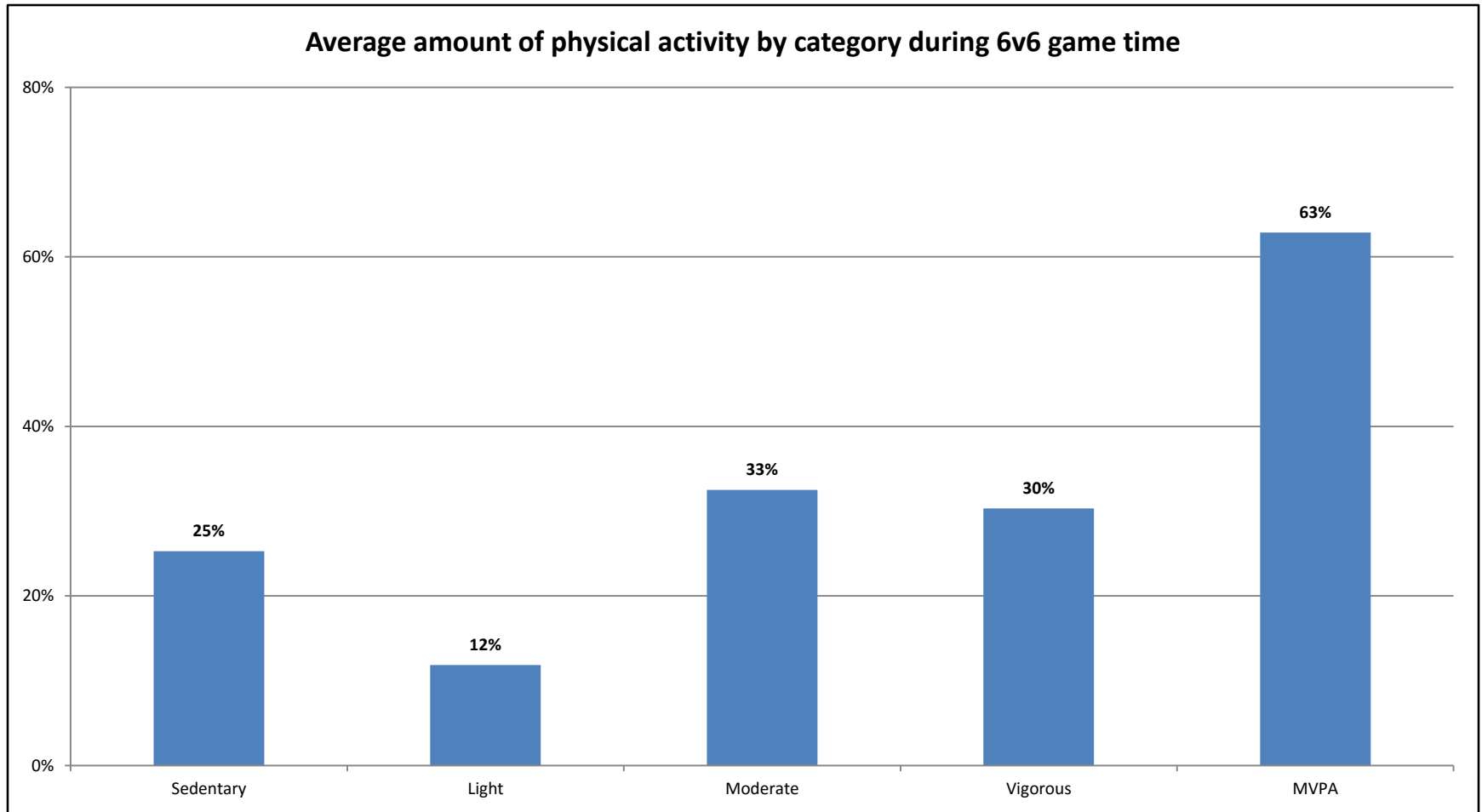
Physical Activity Levels

- Accelerometers used to measure activity
- Four categories of activity
 - Sedentary, Light, Moderate and Vigorous
- Each player's activity levels measured during the game and half time
- Unit's are time stamped
- Provided no other data, GPS, distance covered

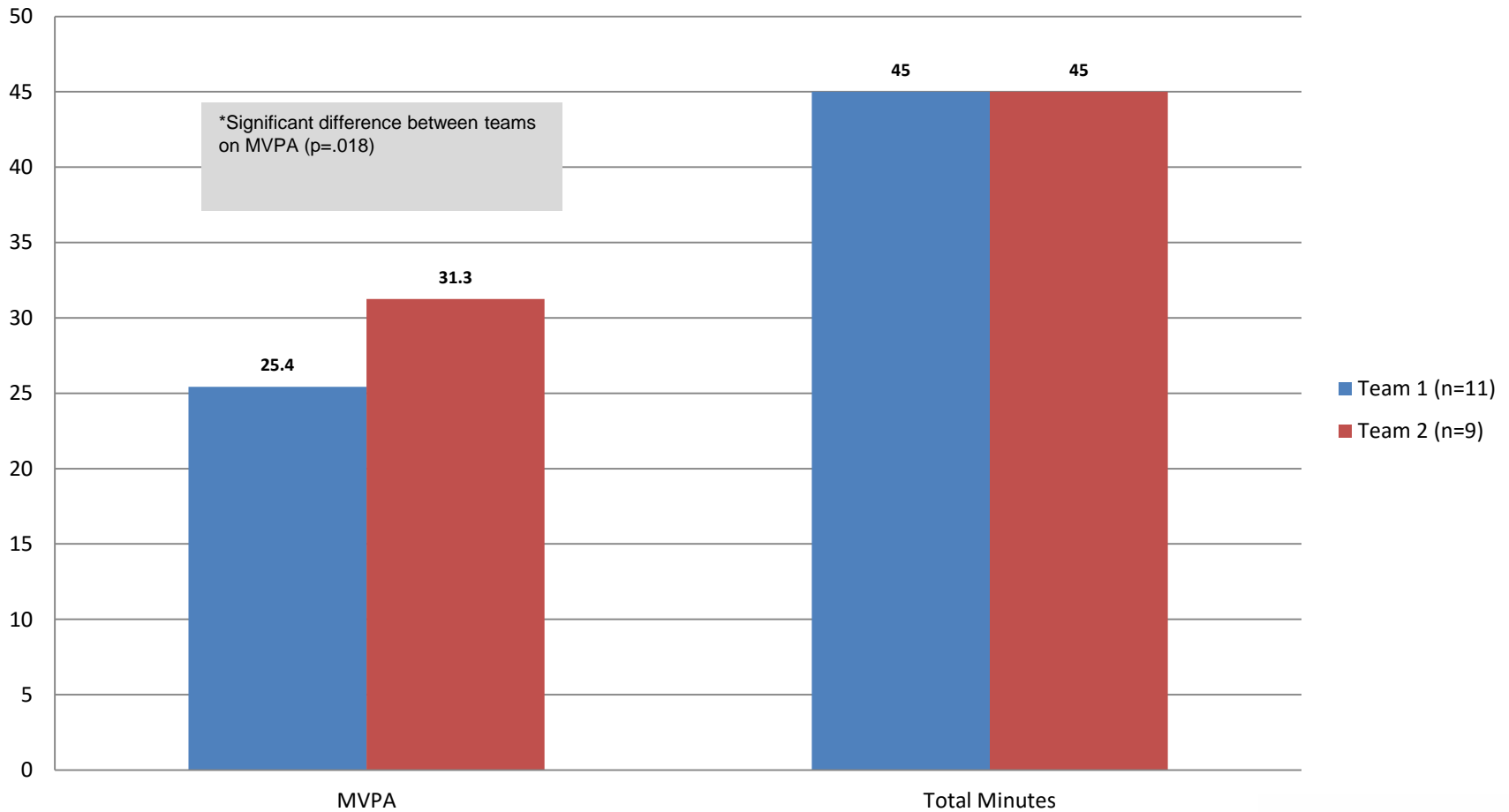
Findings

- The Government of Canada states that every child should get 60 minutes MVPA each day
- How much MVPA in their soccer game
- Only 63% of time spent in MVPA
- More players on the team leads to less MVPA
- That's not rocket science, its common sense

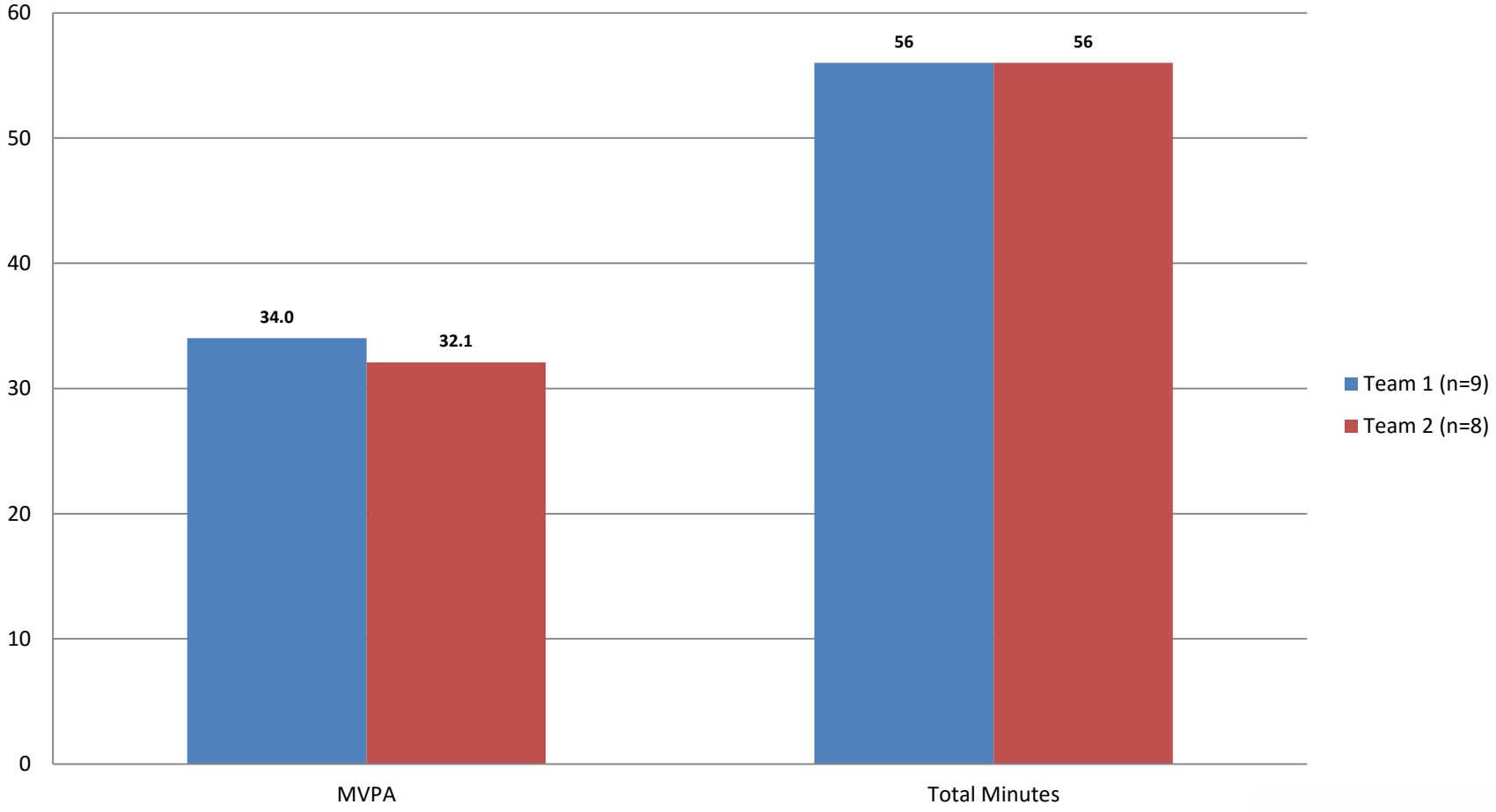
Average amounts of MVPA



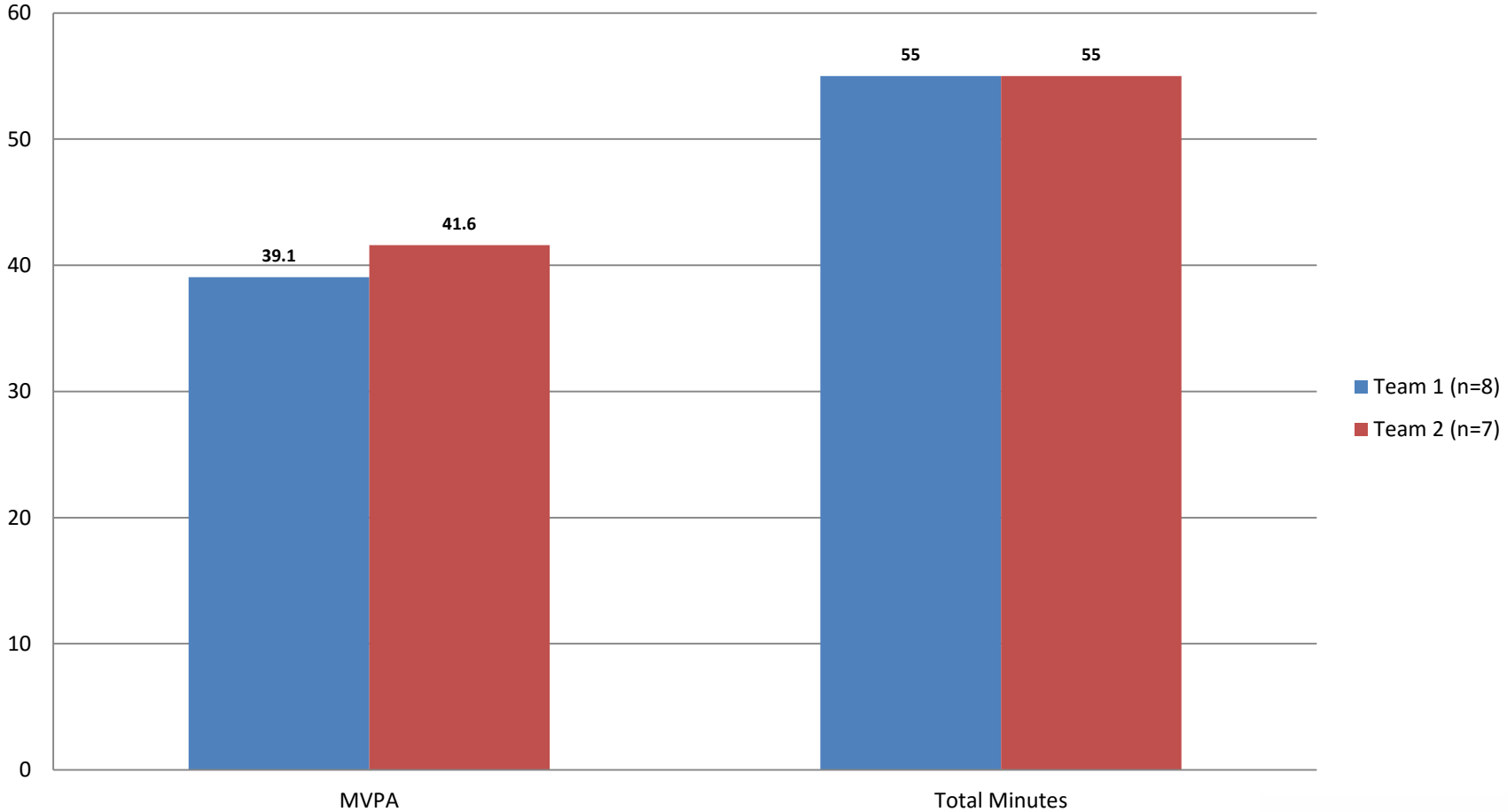
MVPA 11v9



MVPA 9v8



MVPA 8v7



Summary

- The game itself may not provide the levels of physical activity that is required each day
- Are the players as active on non game days?
- What extra do we need to fill the gap and provide the level of activity needed
- Is it as simple as a couple of laps at the start and at the end of the game?
- Heavily dependant on the coach

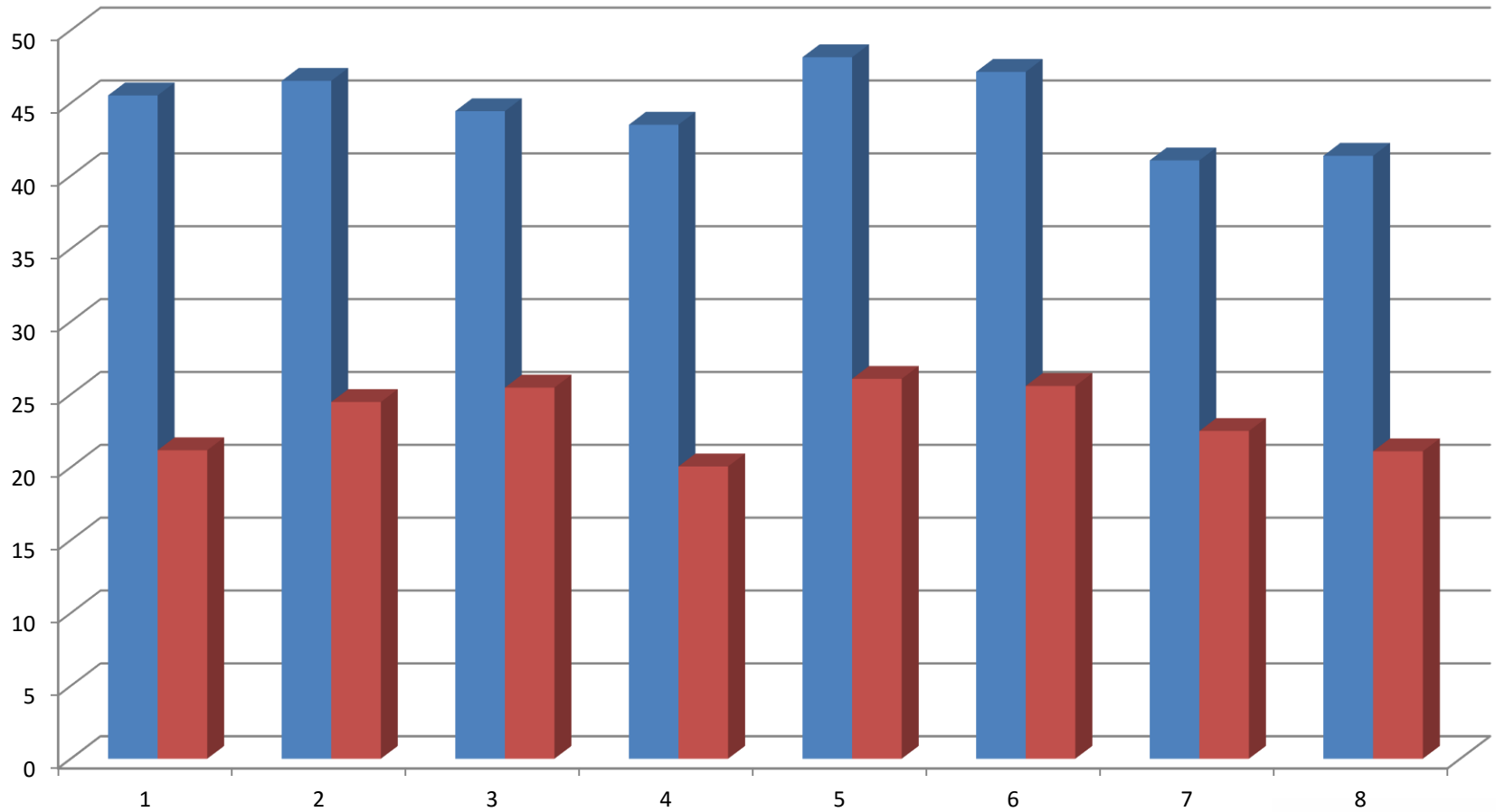
Ball in play

- In the adult game ball is in play for 60 of the 90 minutes
 - 66% in play 34% out of play
- Stoppages in play-
 - time wasting by design
 - feigning injury
 - substitutions late in the game

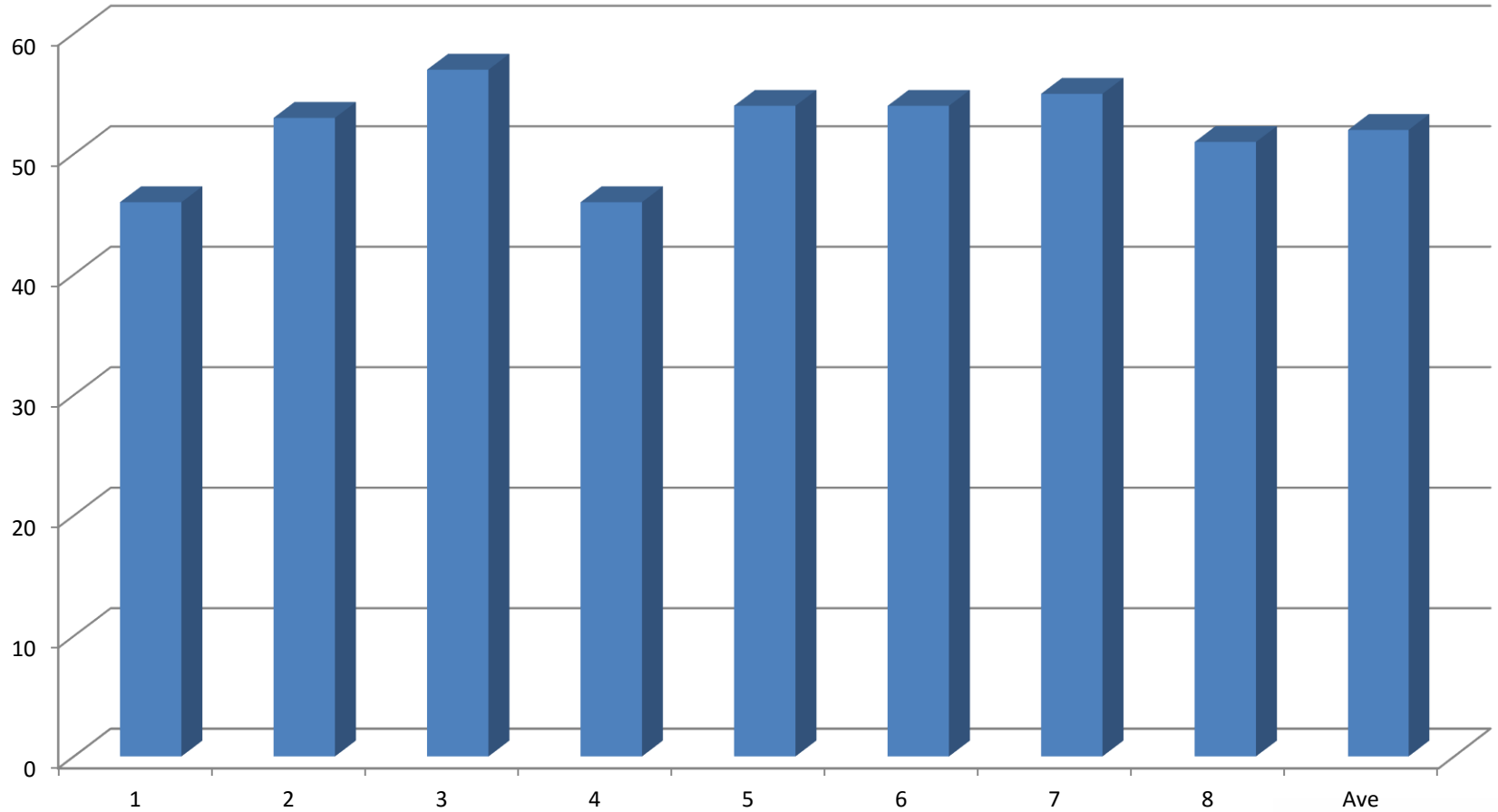
Ball in play study

- U9 and U10 games dual age group jamboree
- 8 games studied
- 4 girls games
- 4 boys games
- Some mixed teams in boys games

Game total time vs. in play



Ball in Play game %



Summary of ball in play

- High 57% | Low 46% | Ave 52%
- Boys game more consistent than girls
- Ball is out of play almost as often as in play
- “Its like turning the light off at a children's party for half of the time”

Ball Contacts

- Simple contact with the ball during the game
- Touches per minute TPM
- 5 games, 10 teams, 89 players recorded
- All games on the same field 2 x 25 mins
- Jean Tigana “Players need 2500 touches a day to develop” 2001-unsourced comment
- How many touches do our players need
- How many touches do they get?

The Games

Game 1 **678 touches** 17 players active

40 touches per player **13.5 TPM in the game**

Game 2 **685 touches** 21 players active

33 touches per player **13.7 TPM in the game**

Game 3 **637 touches** 16 players active

40 touches per player **12.7 TPM in the game**

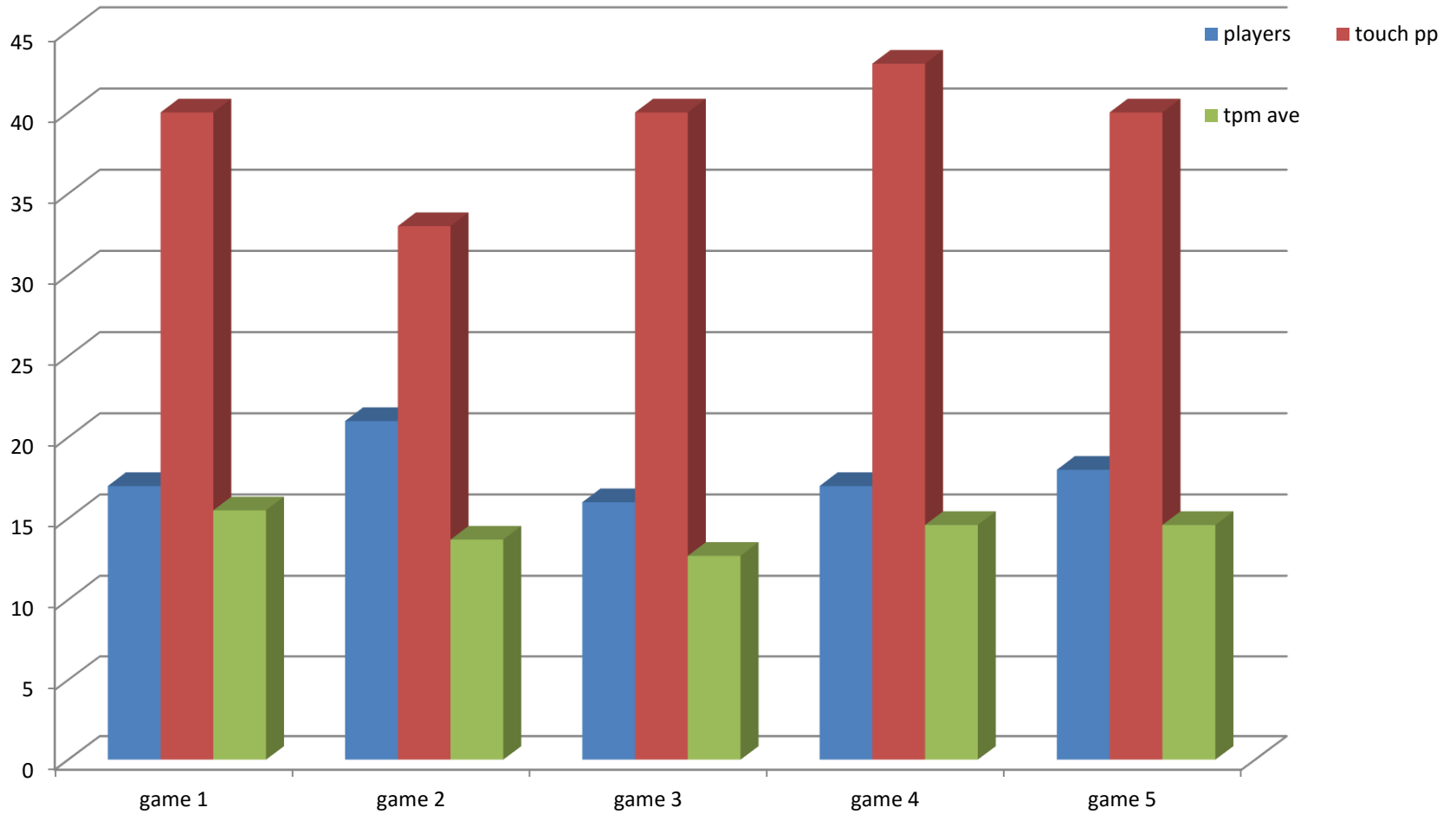
Game 4 **732 touches** 17 players active

43 touches per player **14.6 TPM in the game**

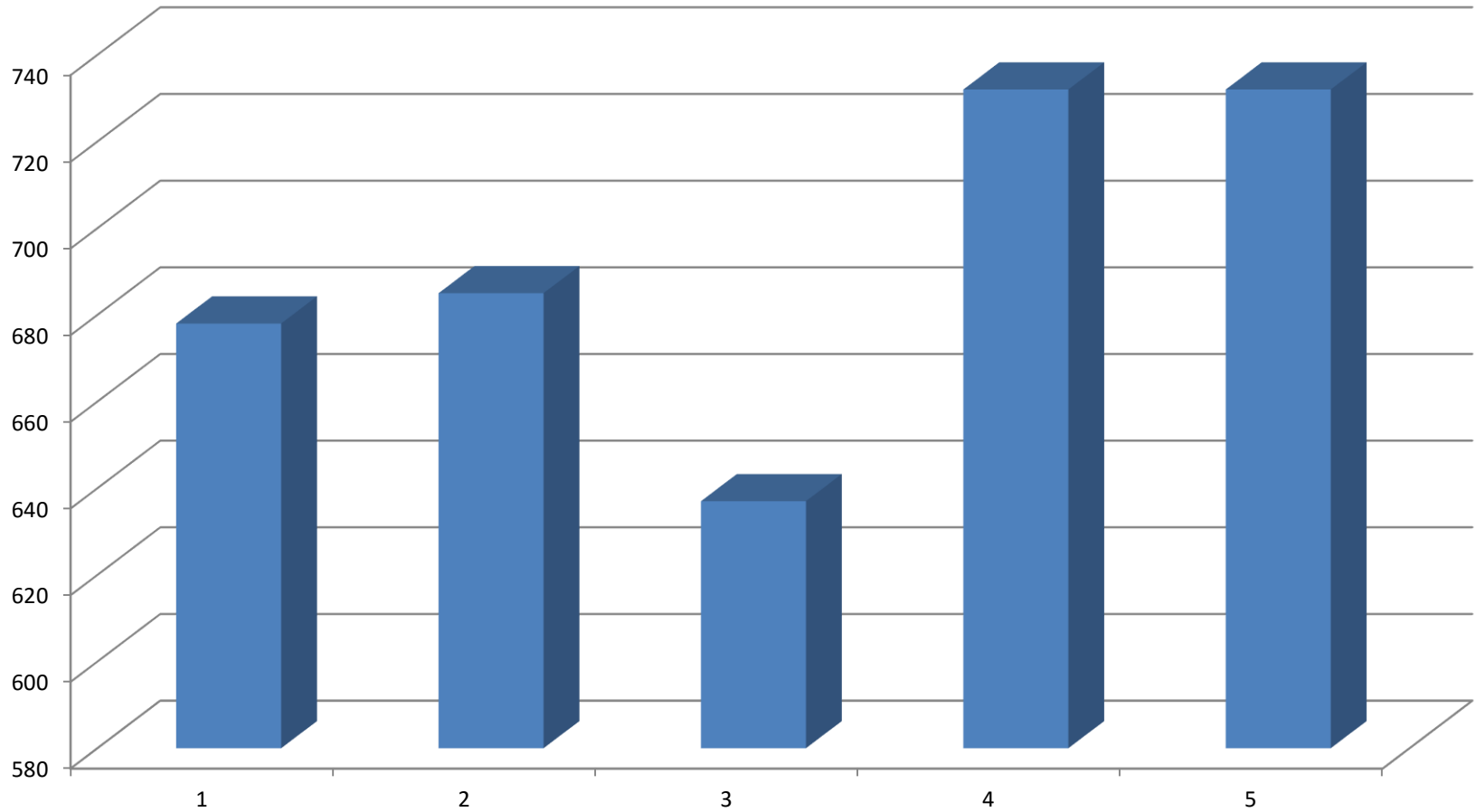
Game 5 **732 touches** 18 players active

40 touches per player **14.6 TPM in the games**

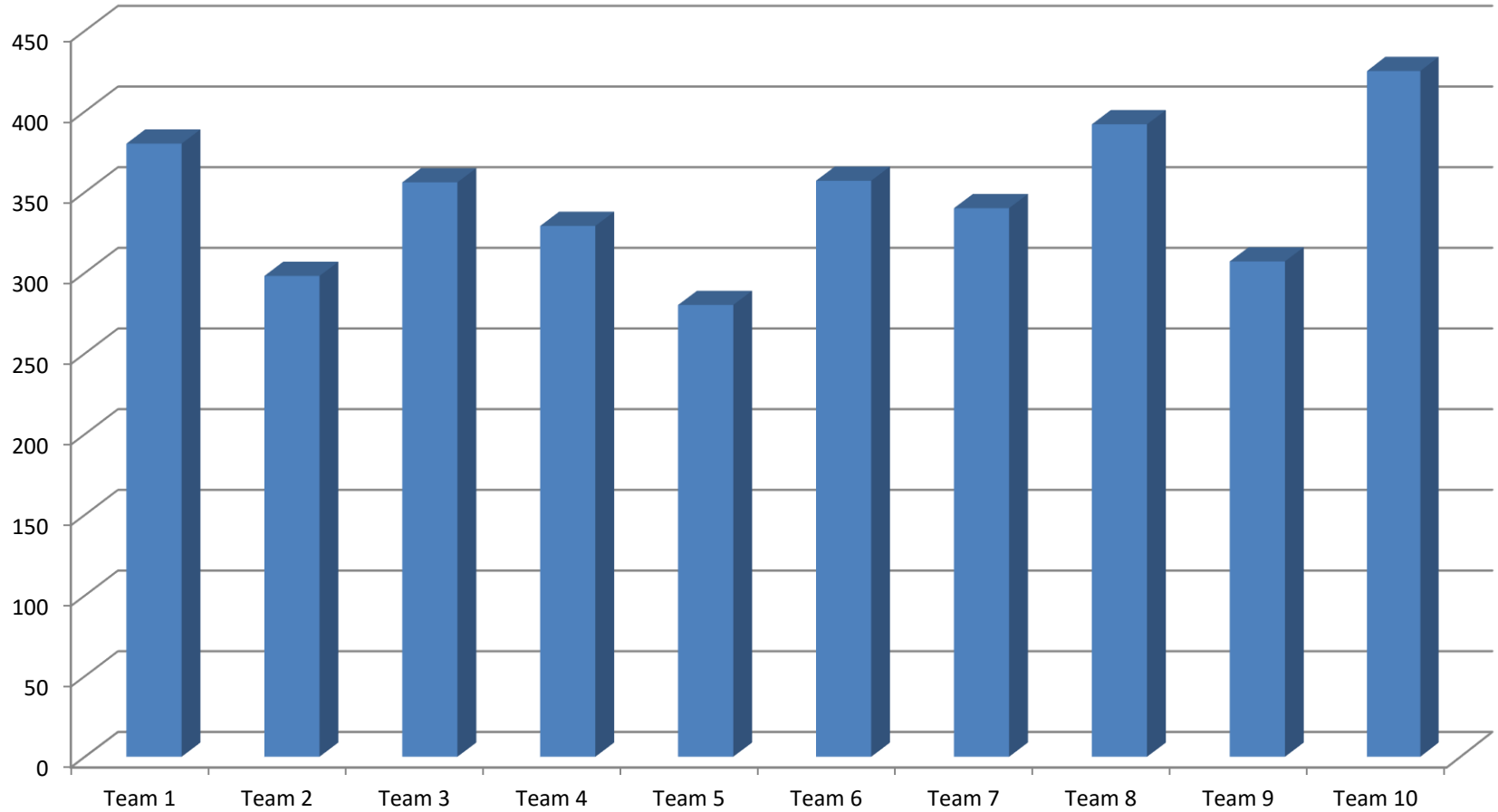
Game Summary



Total touches in each game



Team total touches



The Teams

1 380/8 players= 47 touches pp = .95 TPM

2 298/9 players= 33 touches pp = .66 TPM

3 356/11 players= 32 touches pp = .64 TPM

4 329/10 players= 33 touches pp = .66 TPM

5 280/8 players= 36 touches pp = .72 TPM

6 357/8 players= 44 touches pp = .84 TPM

7 340/9 players= 38 touches pp = .76 TPM

8 392/8 players= 49 touches pp = .98 TPM

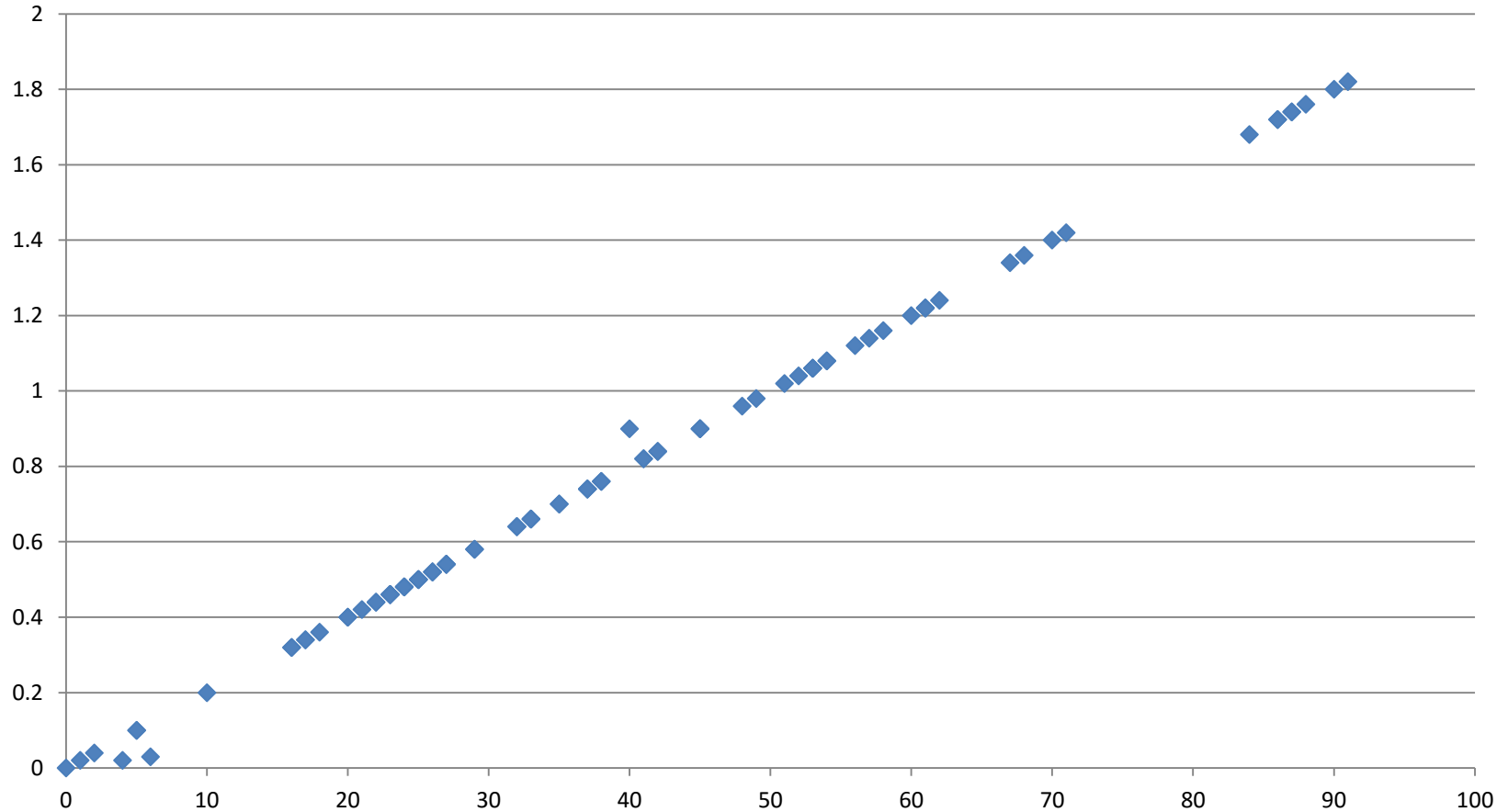
9 307/8 players= 38 touches pp = .76 TPM

10 425/10 players= 43 touches pp = .84 TPM

The Players

- 89 players
- 250 minutes of soccer
- 3464 touches of the ball
- Only 28 players (31%) had > 1 TPM
- Highest TPM 1.82 - 91 touches
- 61 players (69%) < 1 TPM
- 26 players (30%) < 0.5 TPM

Touches Per Minute



Summary of ball contacts

- Game touches range 637-732
- 4 of 5 games within 54 touches
- Smaller squads = more touches per player
- Team touches range 280 to 425
- 6 teams within 63 touches
- Game time was constant
- Field size was relatively constant

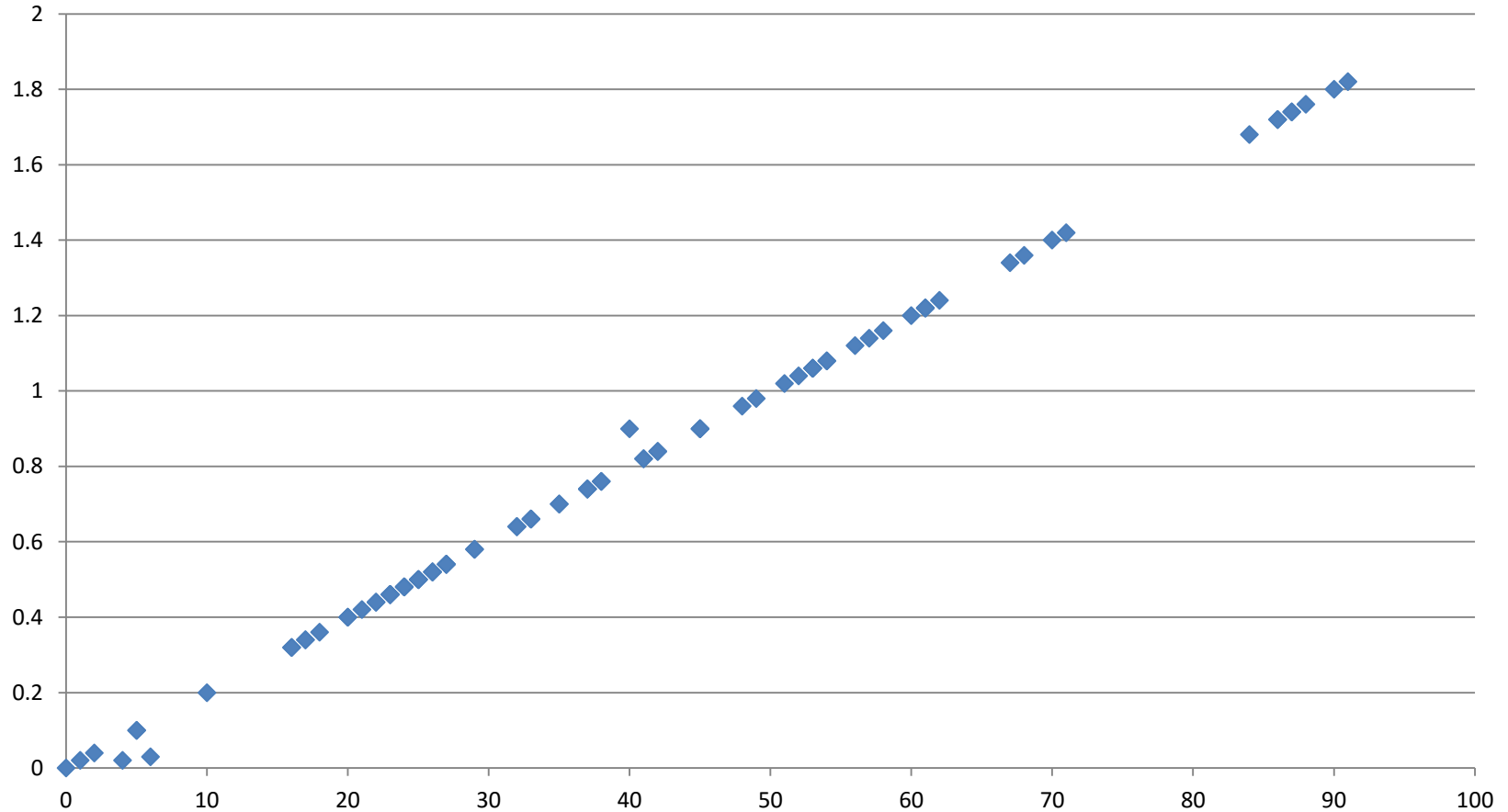
Overall Picture

- Ball is out of play as often as its in play
- Players are relatively active for two thirds of the time
- Game alone does not provide enough activity
- Games did not provide adequate opportunities for ball contact and technical development
- No ball contact = no fun?

So What?

- Does it really matter?
- The cream rises to the top
- We need more cream!
- LTAD tells us that the late developer will develop better in the long run?
- Talent Code- We want ignition in our sport
- Keep them interested and engaged

Touches Per Minute



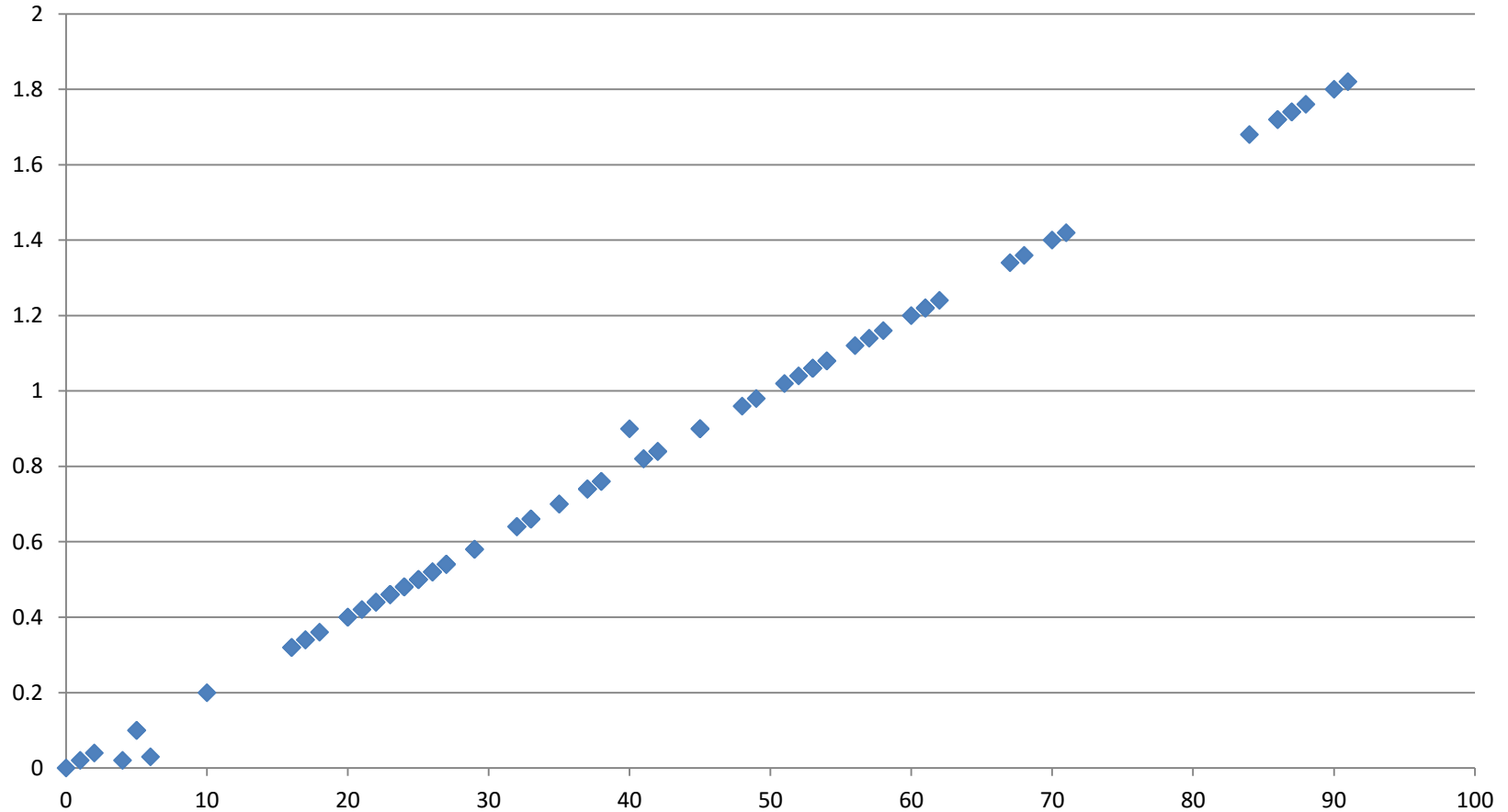
Areas to look at

- Can we improve the environment and if so how many modifications do we need to make?
- Reduce players on the field
- Reduce lost time when ball is out of play
- Roll in: kick in: don't repeat the throw in
- Danish FA suggests 5 balls at each field and parents and siblings as ball boys (2013)
- What is the optimum number of touches

Talent Predictor?

- What else can you measure in youth **soccer players** that will tell you who is going to be the best? In the 10-year Groningen sports talent study, good predictors were **technical skills** at age 12 and **psychological skills** along the lines of "how can I make myself a better player" (high levels of reflection and effort; aspects of self-regulation of learning) [Elferink-Gemser, M].
- Reflection was also the skill that distinguished those who rose to senior international level in a 4-y prospective study of 54 elite youth athletes by these researchers [Jonker, L].

Touches Per Minute



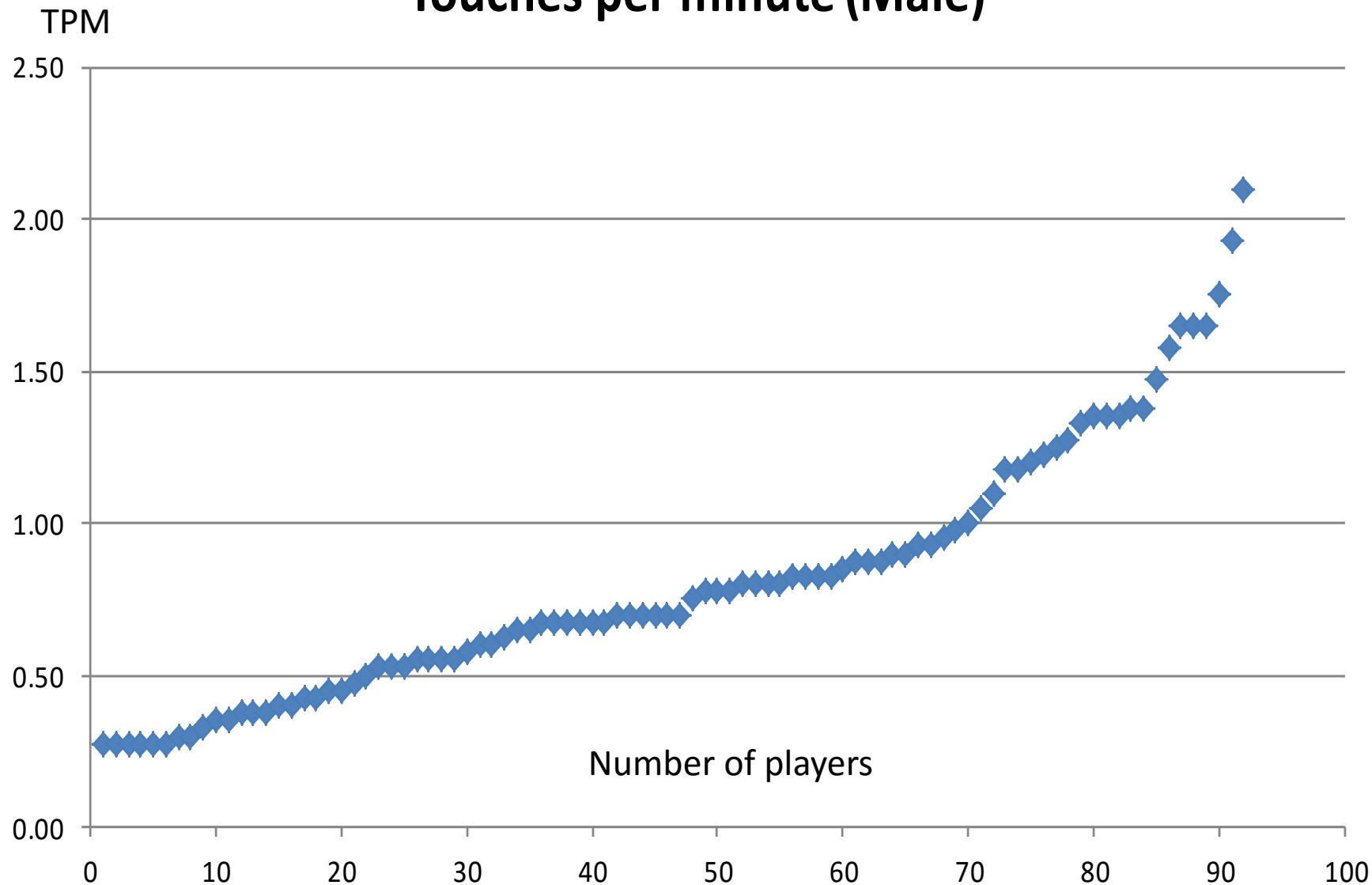
Follow up study U13 transition to full field September 2016

- BC Soccer Premier League Intake Festival
- 8 high performance programs in BC
- Mini games 2x20 minute halves 2 games per day
- All 40 minute games, all on turf, identical sized fields
- Players chosen at random, all contacts recorded
- Boys and Girls data separated

Males

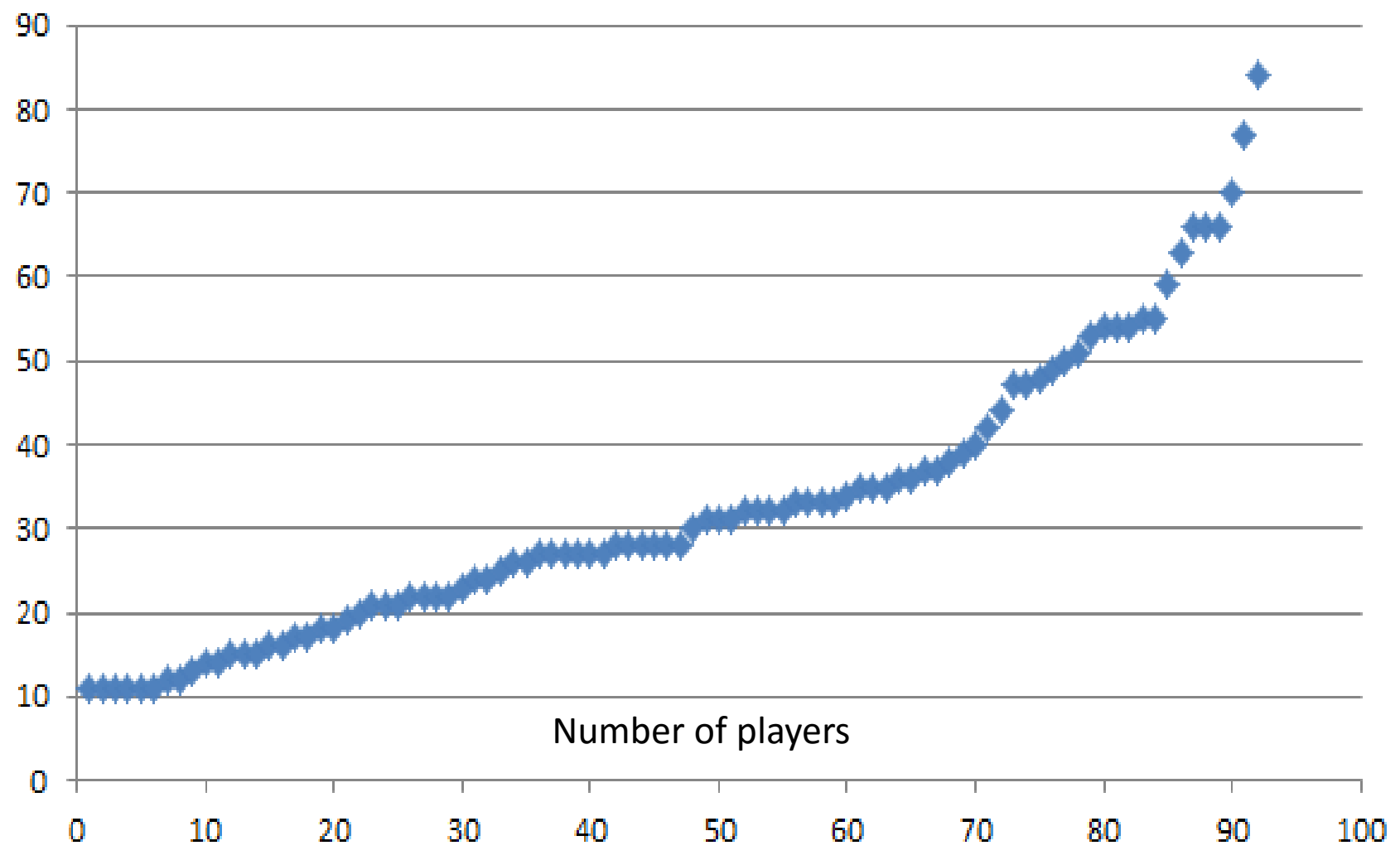
- 92 players surveyed
- Range 11(6)- 94
- Average TPM = 0.81
- 21 players **22.8%** < .5 touches per minute
- 23 players **25%** 1 touch or more per minute
- **75% of players < 1 touch per minute**

Touches per minute (Male)



Touches per game 40 minute game (Male)

Total touches

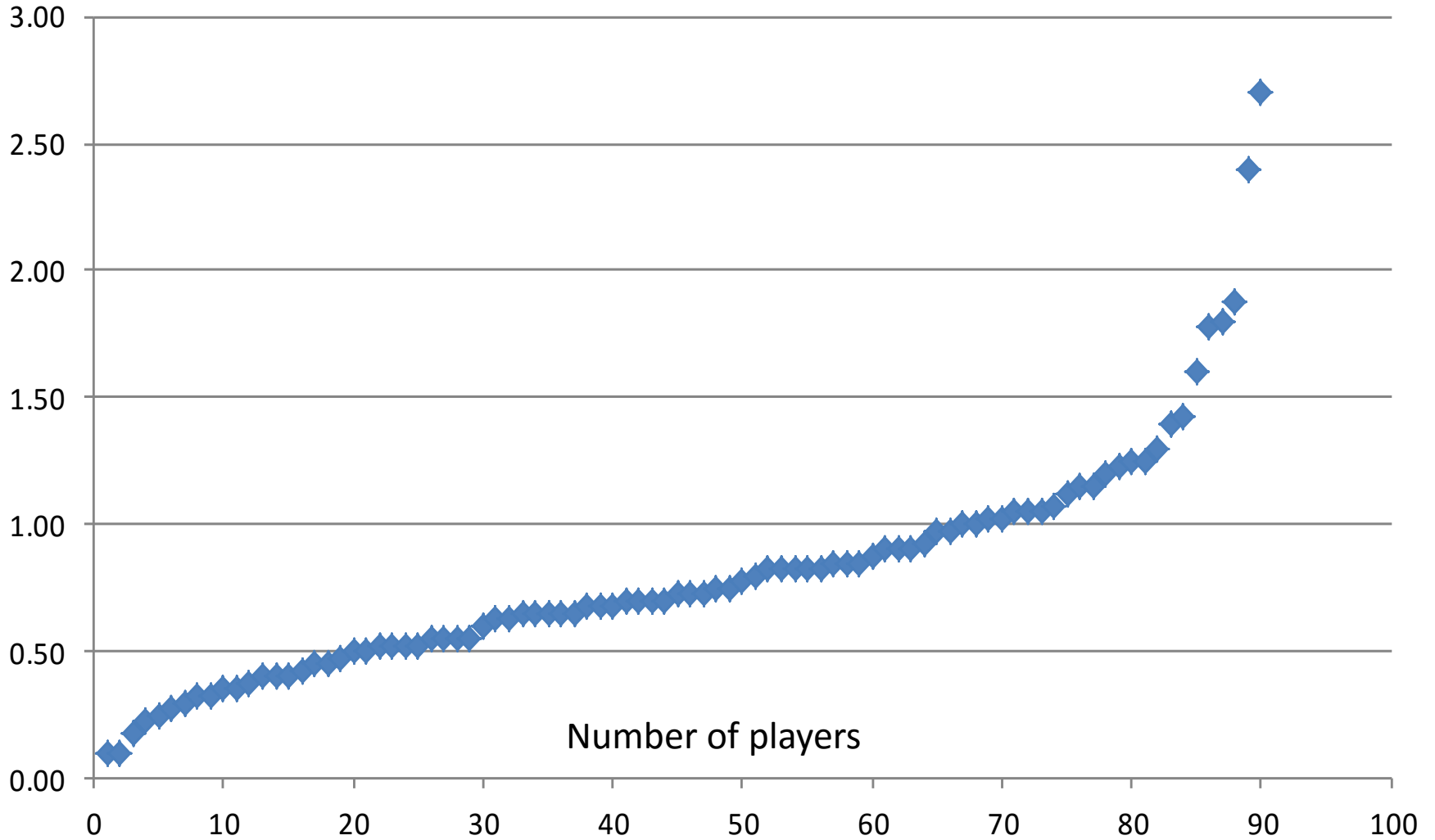


Female

- 90 players surveyed
- Range 4 (2)- 108
- Average TPM = 0.81
- 19 players 21% <.5 touches per minute
- 24 players 26.6% 1 touch per minute or more
- **73.4% of players < 1 touch per minute**

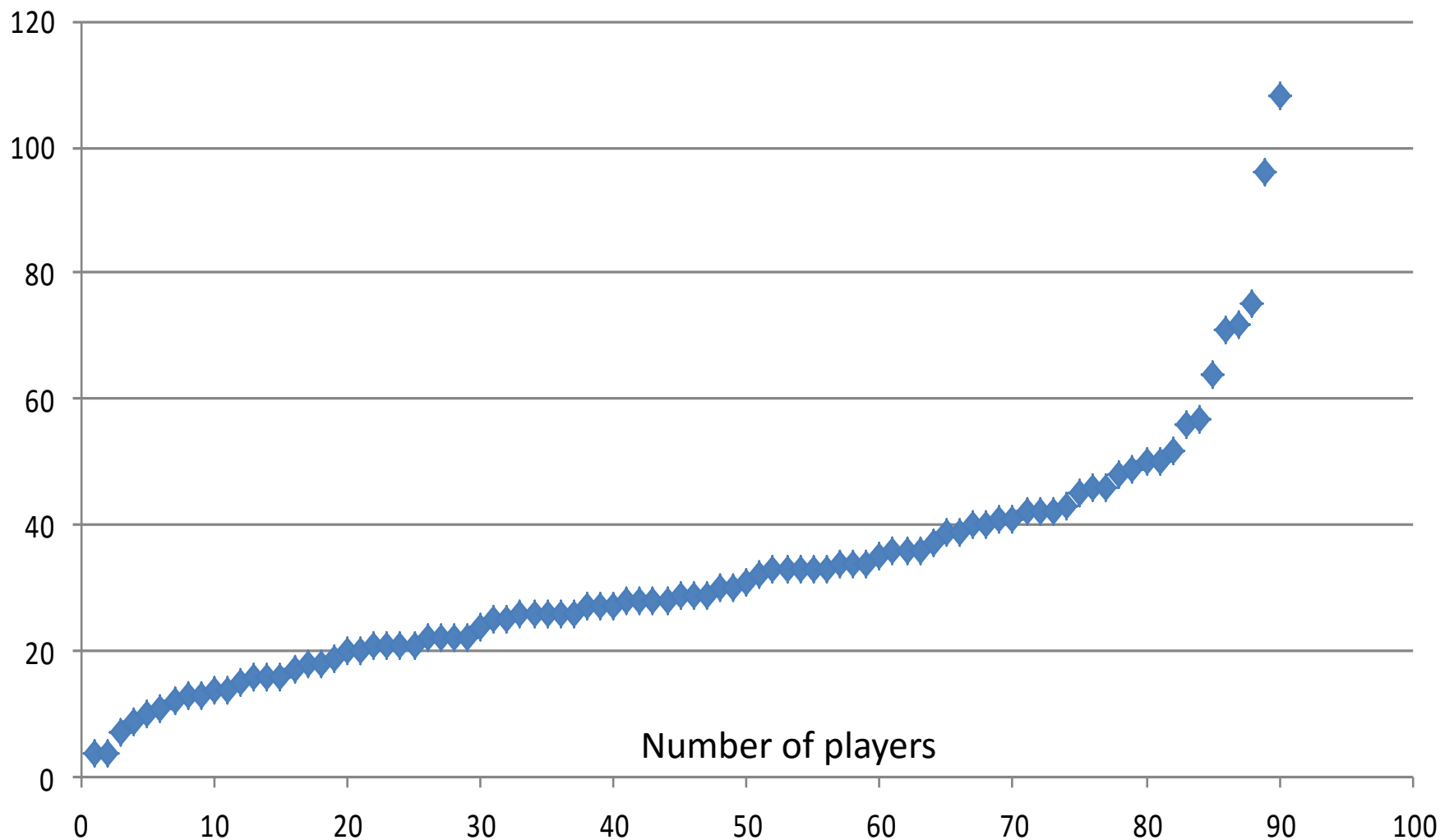
Touches per minute (Female)

TPM



Total Touches

Touches per game 40 minute games (Female)



Issues raised

- Data is almost identical across genders
- The games may 'look different' but that is gender bias in relation to ball contact
- **Three out of every four players received less than 1 ball contact per minute**
- Not enough exposure to the ball or decision making opportunities

Questions

- What do we want the players to get from the game experience?
- Why do we move to the bigger adult size field when they are still children?
- Is there a better game model for younger players?