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## versus Single Player Active Videogames in Young Healthy Males

Tough, D.<sup>1</sup>, Board, E.M.<sup>2</sup>, Barry, G.<sup>3</sup>

<sup>1</sup> School of Health and Social Care, Teesside University

<sup>2</sup> Department of Sport and Exercise Sciences, University of Sunderland

<sup>3</sup> Department of Sport, Exercise and Rehabilitation, Northumbria University

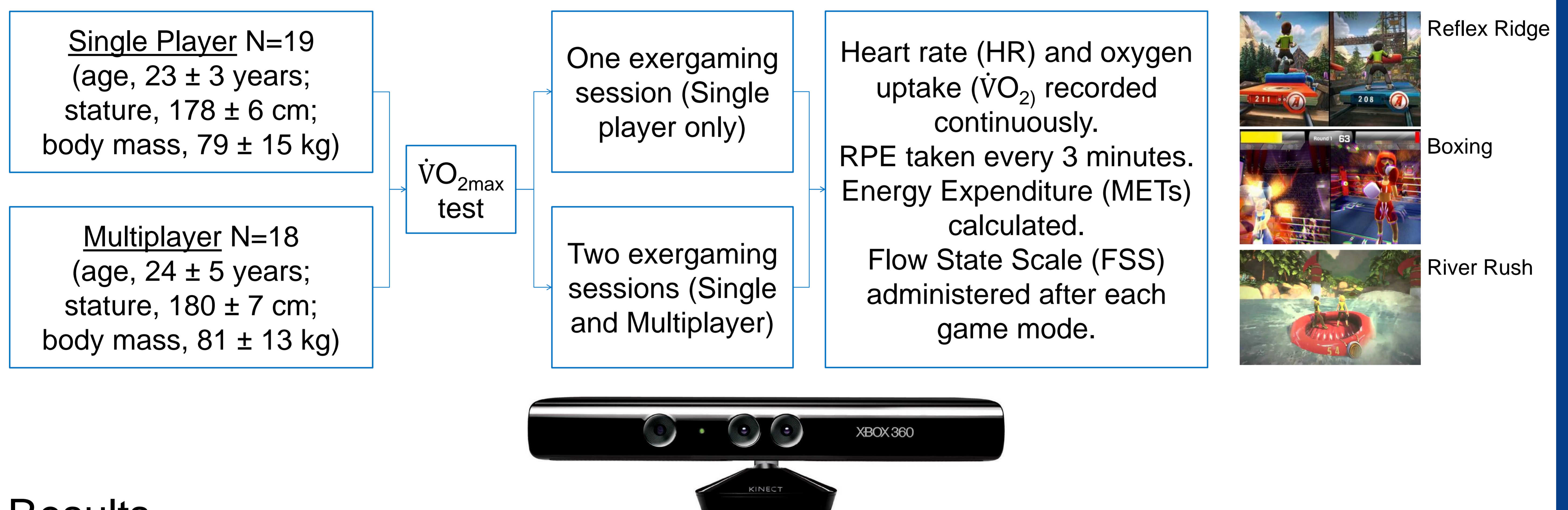
### Introduction

- Almost one third of 2 to 15 year olds are overweight in the UK [1].
- Within the UK, video games are played for over 12 hours per week [2].
- Active videogames (AVGs) may have the potential to be used to increase physical activity levels of individuals, used in combination with other sources of activity [3].

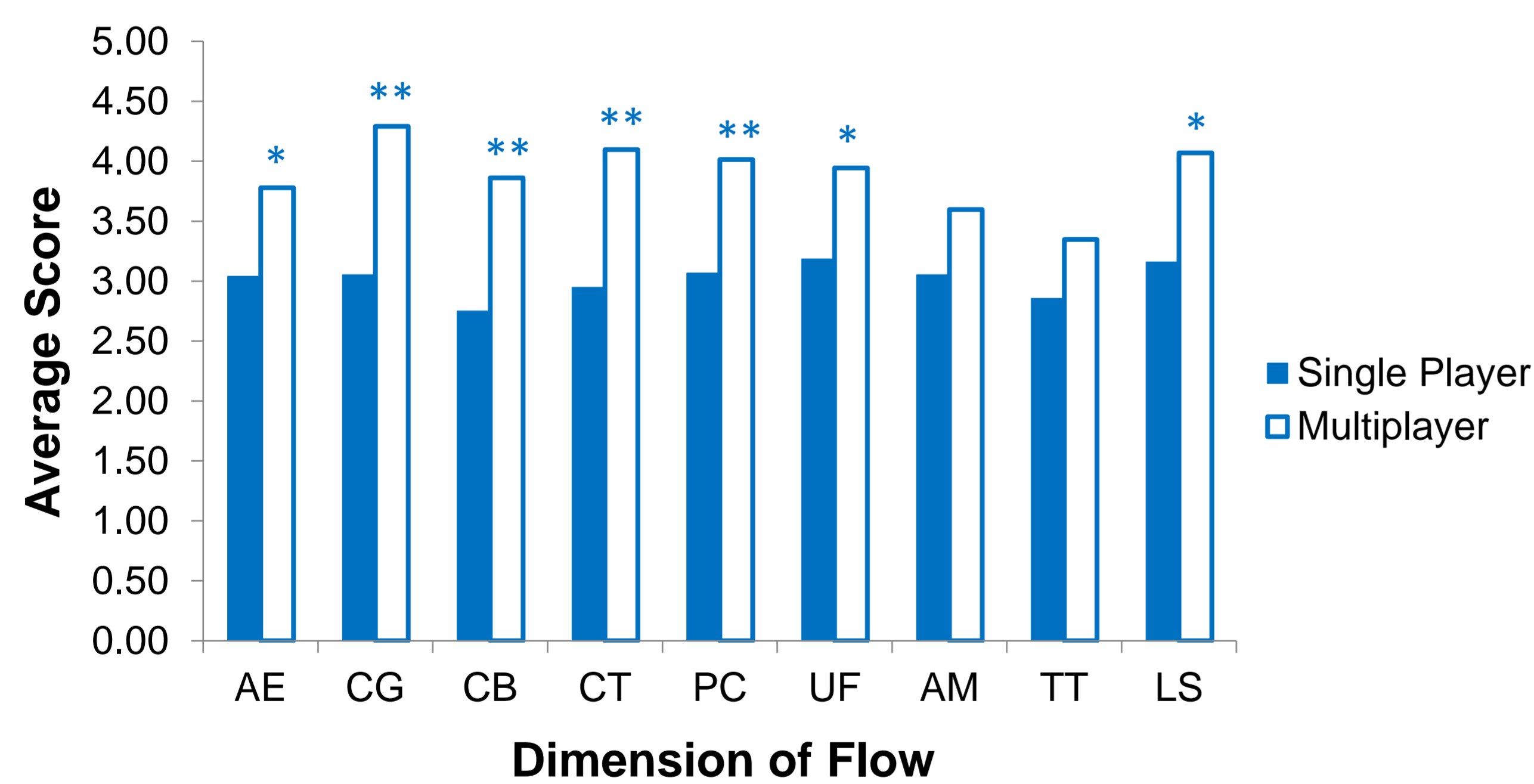
### Aims

- 1) To assess the physiological cost of AVGs in a multiplayer mode, in comparison to single player.
- 2) To assess intrinsic motivation of participants during each game mode.

### Method



### Results



**Figure 1.** Flow scoring during AVGs between single player gaming (N=19) and multiplayer gaming (N=18). \*  $p \leq 0.05$ , \*\*  $p \leq 0.01$

**Table 1.** Average physiological and subjective data for AVGs between single (N=19) and multiplayer (N=18) gaming

	RPE	%HR <sub>max</sub>	% $\dot{V}O_{2max}$	METs
<b>Single Player</b>	12 ± 1	68 ± 9	49 ± 12	7 ± 2
<b>Multiplayer</b>	11 ± 2**	62 ± 8**	41 ± 13**	6 ± 1**

\*  $p \leq 0.05$ , \*\*  $p \leq 0.01$

### Conclusion

- During AVGs, participants displayed greater motivation whilst playing with a human opponent.
- Despite greater motivation during multiplayer gaming, single player gaming showed significantly greater physiological and cardiorespiratory responses.

### References

1. Conolly, A. (2016) Health Survey for England 2015: Children's body mass index, overweight and obesity.
2. Statista (2018) Time children spend gaming weekly in the United Kingdom (UK) 2013-2017, by age.
3. O'Donovan, C. and Hussey, J. (2012) Active video games as a form of exercise and the effect of gaming experience: a preliminary study in healthy young adults. *Physiotherapy*, **98**(3), 205-210.

