

# Examining the Relationship Among University Students' Physical Self-Perceptions, Motor Skill Proficiency, and Physical Activity Behavior within the Framework of Physical Literacy

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## Introduction

- Physical literacy (PL) refers to "the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life".<sup>1</sup>
- Research exploring PL has focused primarily on children, highlighting the need to examine PL in other populations across the lifespan.<sup>2</sup>
- The transition between youth and adulthood, coinciding with the transition from high school to college/university, is marked by a decrease in physical activity levels.<sup>3,4</sup>
- Research with young adults has examined the relationships between motor skill competence, physical fitness, physical activity, and self-perceptions independently.<sup>5,6,7</sup> However, it is unclear how these PL-related constructs may be inter-related in adulthood.

**Purpose: To examine the relationships among motor skill proficiency, physical self-perceptions, and physical activity behavior in university students.**

## Methods

### Participants

- Undergraduate university students (n = 62; 77% F) aged 18-25 years (M<sub>age</sub> = 20.11, SD = 1.46). Participants were recruited using convenience sampling (participant pool, email, social media, posters on campus).

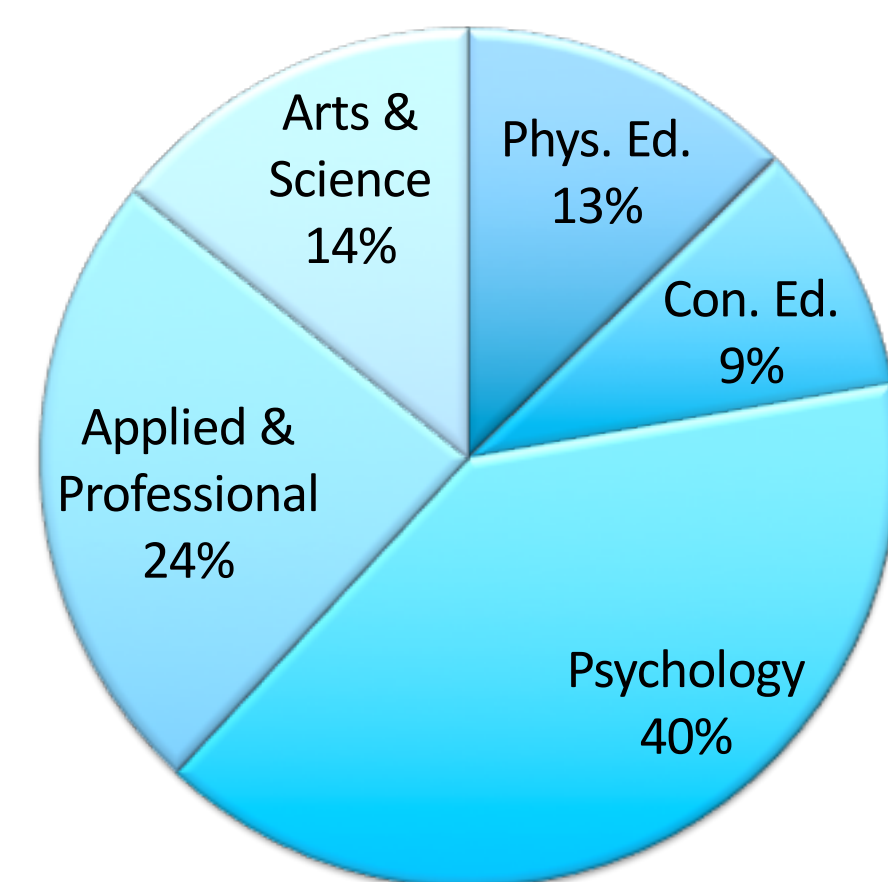


Figure 1. Participants' (n = 62) Degree Program

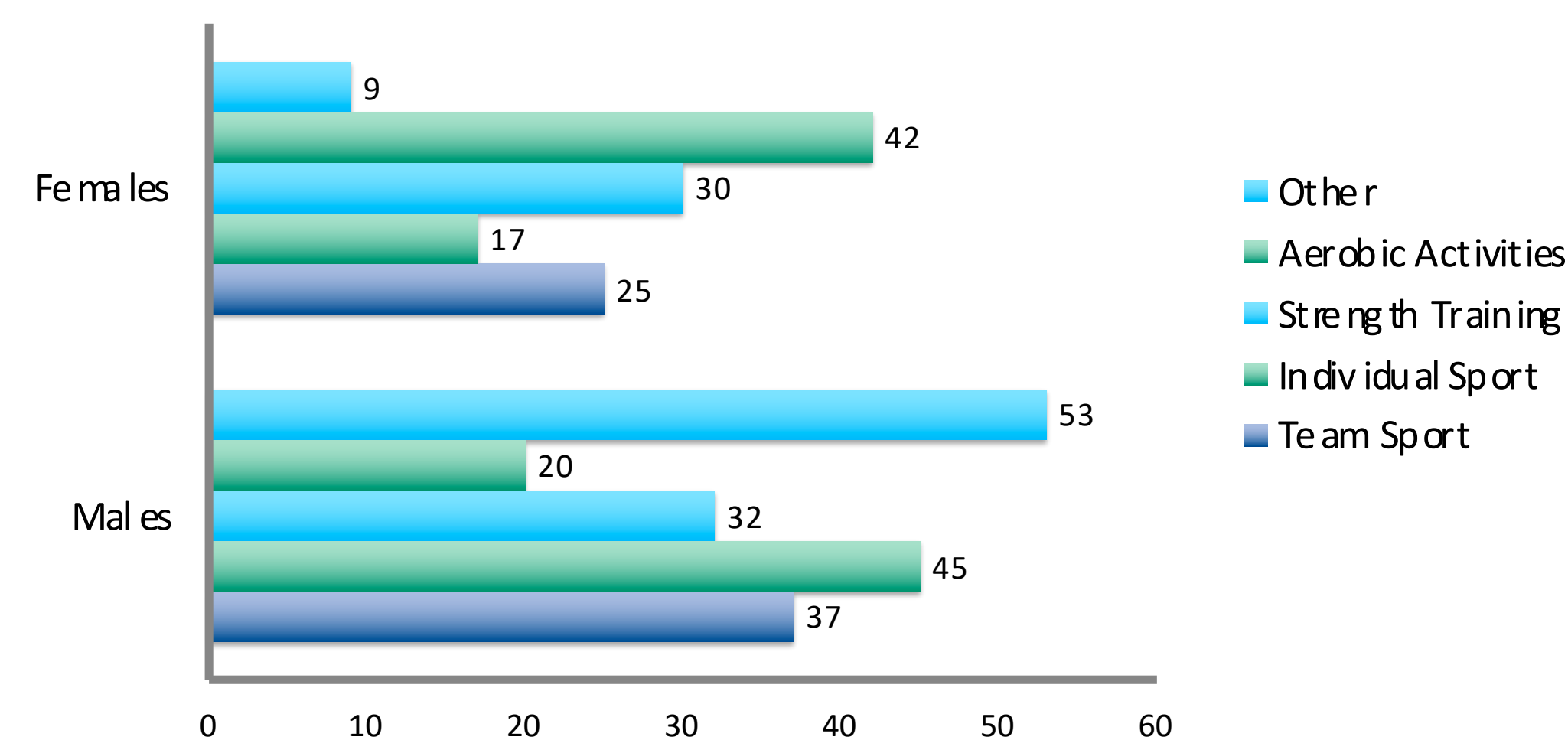


Figure 2. Frequency of Participants' (n = 62) PA Types  
Participants were asked to self-report all types of PA they currently participate in.

### Measures

- Motor skill proficiency** was assessed by max ball speed (throwing and kicking) and max horizontal distance (jumping).<sup>5</sup>
- International Physical Activity Questionnaire (IPAQ-Short Form)** 7 day recall<sup>8</sup> was used to assess participants' self-reported physical activity. Based on their responses, participants were classified into categories.

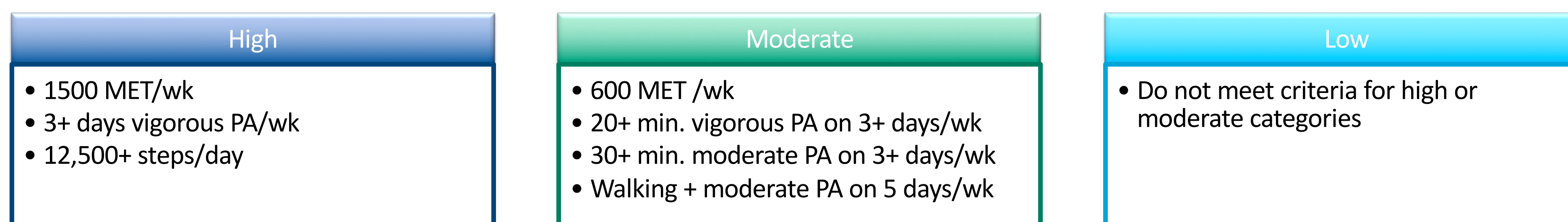


Figure 3. IPAQ-Short Form criteria for categorizing participants' physical activity levels.

- Physical Self-Perception Profile (PSPP)**<sup>9</sup> was used to assess participants' self-reported physical competence. Subscale scores reflect the sum of item ratings.

Table 1. PSPP subscales and internal consistencies.

Subscale	Items	$\alpha$
Sport Competence	6	.905
Physical Condition & Exercise	6	.912
Body Attractiveness	6	.806
Physical Strength & Muscular Development	6	.804
Physical Self-Worth	6	.806

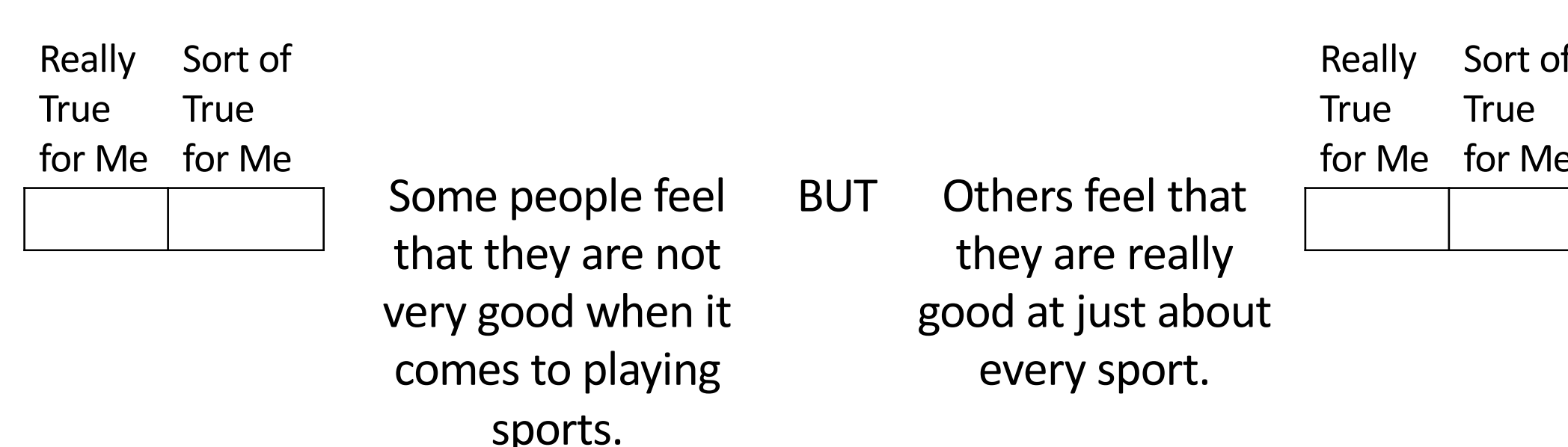
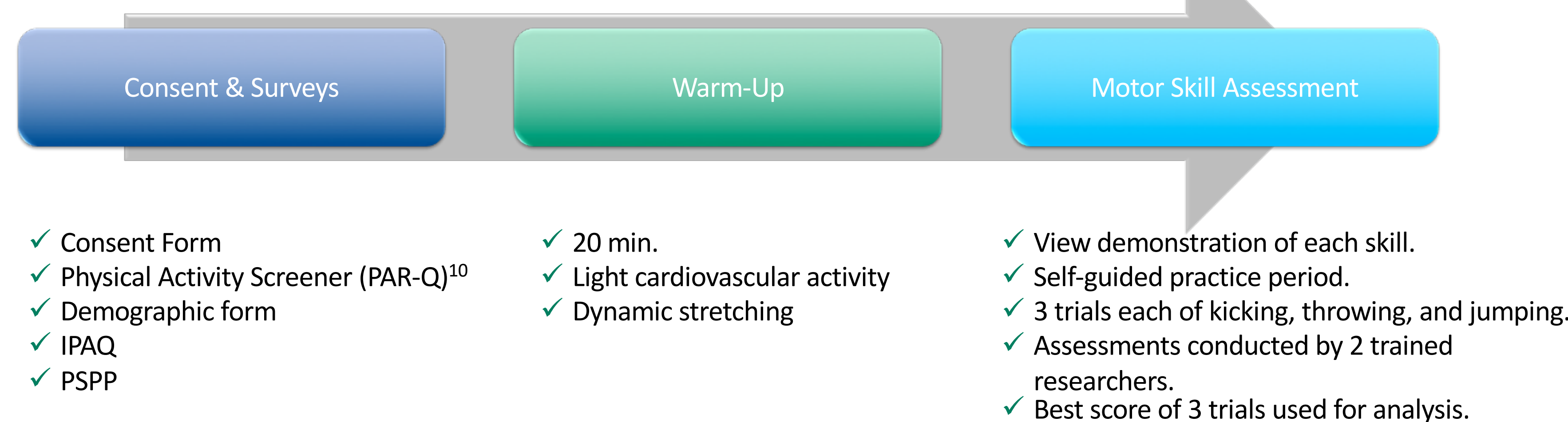


Figure 4. Example PSPP item from the sport competence subscale.

### Procedure

- All assessments were completed during one session in the University gymnasium.



## Results

### Relationship between Motor Skills and Physical Self-Perceptions

Table 2. Correlations among motor skills and physical self-perceptions (n = 62).

	Kicking	Jumping	Sport Competence	Physical Condition	Physical Strength	Body Attractiveness	Personal Self-Worth
Throwing	.742**	.768**	.576**	.443**	.462**	.220	.438**
Kicking	1	.748**	.618**	.399**	.436**	.271*	.416**
Jumping	--	1	.506**	.412**	.420**	.282*	.432**

\* $p < .05$ , \*\* $p < .01$

### Sex and Physical Activity Level Effects: 2 (Sex) x 3 (IPAQ category) MANOVA

- Sex differences existed for motor skill performance (Figure 5), but not for physical self-perceptions ( $p > .05$ ).

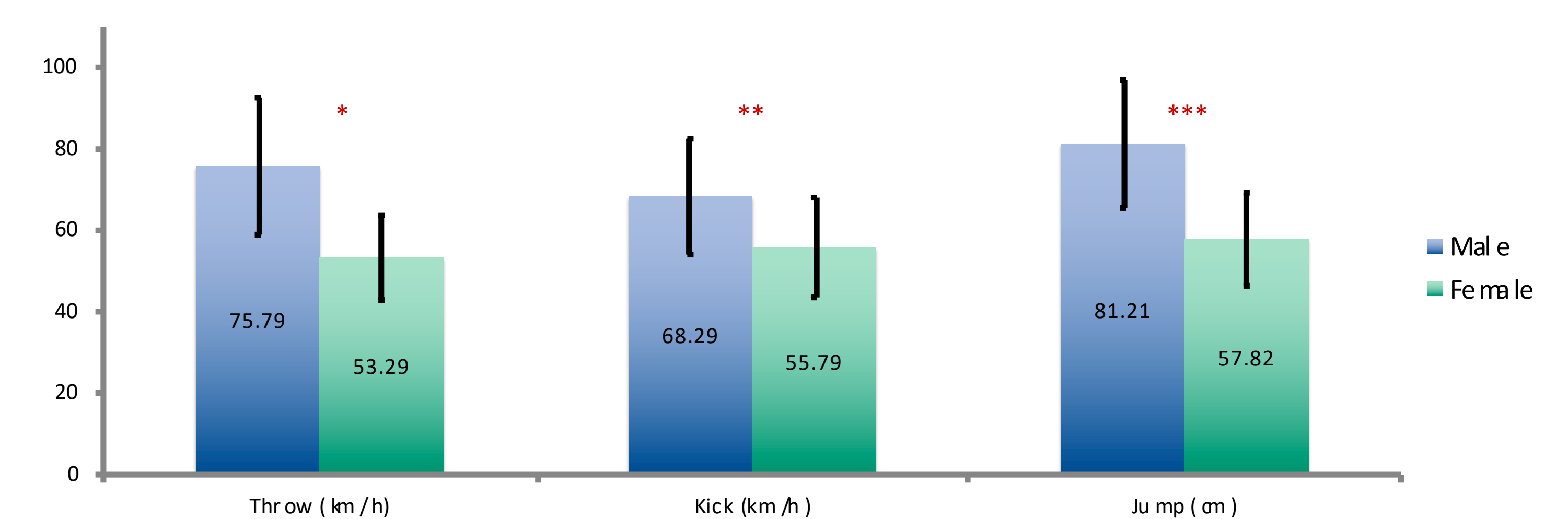


Figure 5. Sex differences in motor skill performance.

Pillai's Trace = .562,  $F(16, 102) = 2.65$ ,  $p < .05$ ,  $\eta^2 = .52$ .  
\* $F(1, 57) = 30.68$ ,  $p < .0001$ ; \*\* $F(1, 57) = 10.25$ ,  $p < .01$ ; \*\*\* $F(1, 57) = 33.32$ ,  $p < .0001$

- Physical activity level differences were present for throwing, as well as three of the PSPP subscales (Table 3).

Table 3. Descriptives for motor skills and physical self-perceptions by physical activity category (n = 62).

	Physical Activity Category					
	High (n = 29)		Moderate (n = 28)		Low (n = 5)	
	M	SD	M	SD	M	SD
Throwing (km/h)	66.17*	15.74	52.50	11.56	46.00	7.94
Kicking (km/h)	64.45	14.29	54.00	11.04	50.60	10.78
Jumping (cm)	69.63	16.78	58.66	12.20	50.15	13.74
<b>PSPP subscales</b>						
Sport competence	17.21**	3.62	12.39	3.94	11.40	2.41
Physical condition	16.79**	3.78	13.89	4.60	9.80	0.84
Body attractiveness	12.86	3.56	12.93	3.63	12.00	2.55
Physical strength	15.79**	3.51	12.18	3.70	11.20	1.92
Physical self-worth	15.34	4.44	13.68	3.38	14.45	3.87

\* $p < .01$ , \*\* $p < .001$

Note. PSPP subscale scores range from 6 to 24. Main effect for IPAQ category: Pillai's Trace = .587,  $F(16, 102) = 2.65$ ,  $p < .05$ ,  $\eta^2 = .52$ .

## Discussion

- The results provide preliminary support for the inter-dependence of three PL components (physical activity behavior, self-perceptions, and motor skill proficiency) among young adults. Specifically, individuals who reported being more active had higher levels of throwing proficiency and more positive self-perceptions related to their physical fitness and abilities.
- Further research is needed to examine whether existing multi-dimensional models of PL can be applied to the young adult population and to develop a PL assessment for this population, similar to those available for children.<sup>11, 12, 13</sup>
- Assessment of PL across the lifespan would provide valuable surveillance data regarding changes in PL components, and a method for evaluating the effectiveness of interventions designed to improve PL.

## References

A copy of this poster, including all reference information, is available from the last author, or as a digital download.

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