

Spatial autocorrelation of perceived physical activity competence among adolescent friendship networks at a summer care program

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Introduction

- Despite its many health benefits, adolescents are less likely to participate in physical activity (PA) during summer
- Summer care programs (e.g., Boys & Girls Clubs) can promote PA while providing opportunities for friendships
- Perceived PA competence is the belief in one’s ability to perform skills related to PA
- Adolescents who report feeling more competent in PA are more likely to be active

Purpose

To investigate adolescent friendship and perceived PA competence at a summer care program

Methods



Adolescents at a summer care program completed researcher-administered surveys at the start (T1) and end (T2) of summer to determine differences in time points



Adolescents reported how good they felt they were at PA in certain settings, and names of up to five peers whom they hung around with most while at the program



Linear network autocorrelation models determined if adolescent perceived PA competency was significantly associated with that of their friends

Results

Sample characteristics

	Time 1 (n=100)	Time 2 (n=77)
Age M(SD)	9.94 (1.34)	9.83 (1.46)
Sex % (N)		
Male	47% (47)	50.6% (39)
Female	53% (53)	49.4% (38)
Race %(N)		
Black	55% (55)	49.4% (38)
White	33% (33)	27.3% (21)
Multi-Racial	7% (7)	10.4% (9)
Other	5% (5)	13% (10)
Ethnicity %(N)		
Hispanic	36% (36)	40.3% (31)
Non-Hispanic	64% (64)	59.7% (46)

Linear Network Autocorrelation Model Results

	Time 1 (R ² =0.20)			Time 2 (R ² =0.17)		
	Estimate	SE	p-value	Estimate	SE	p-value
Age	0.28	0.02	<0.01*	0.25	0.02	<0.01*
Sex	0.08	0.18	0.65	0.09	0.23	0.71
Network Effects	0.05	0.02	<0.01*	0.05	0.02	0.02*

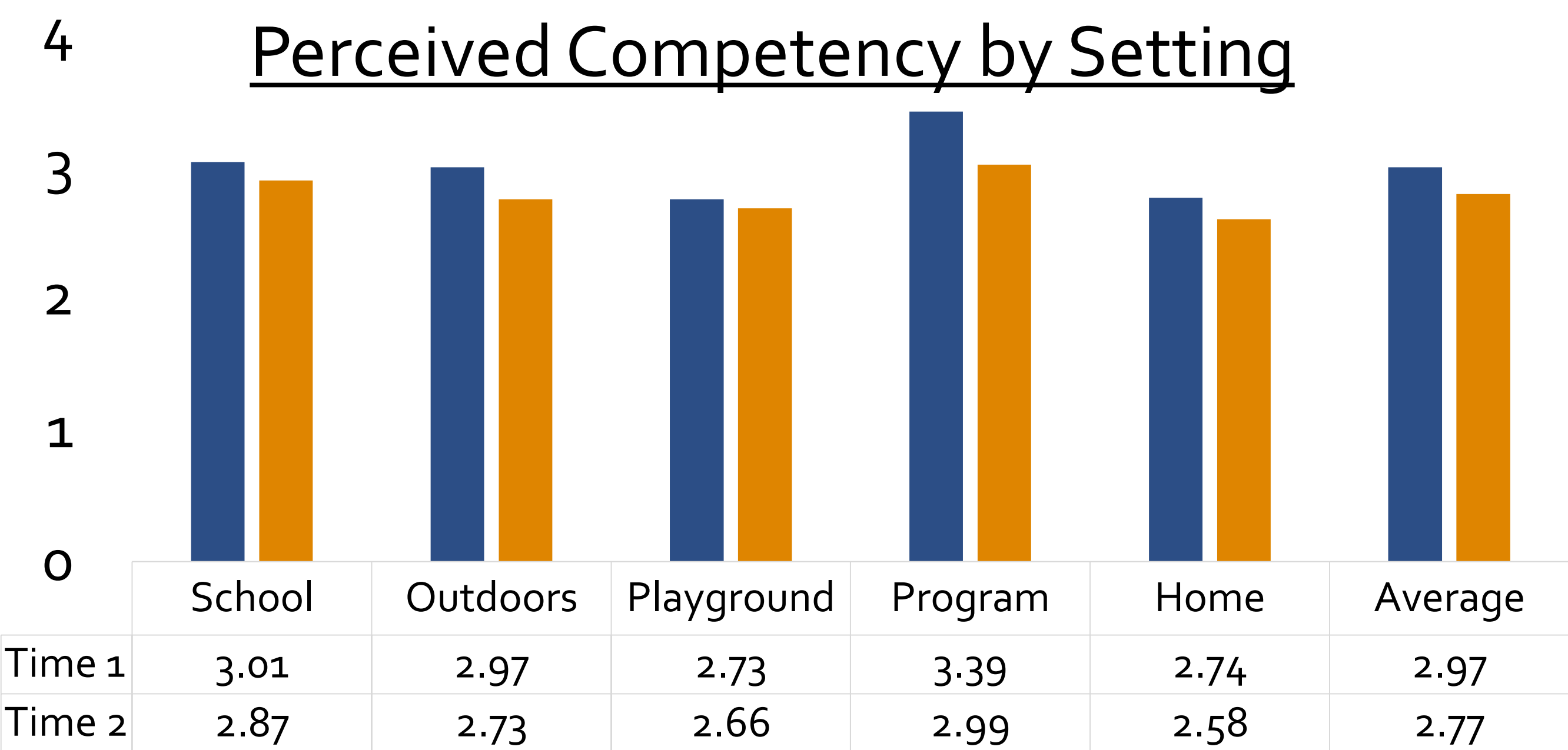
Note: * significant at p<0.05, which is determined by the estimate being double the standard error; SE= standard error;



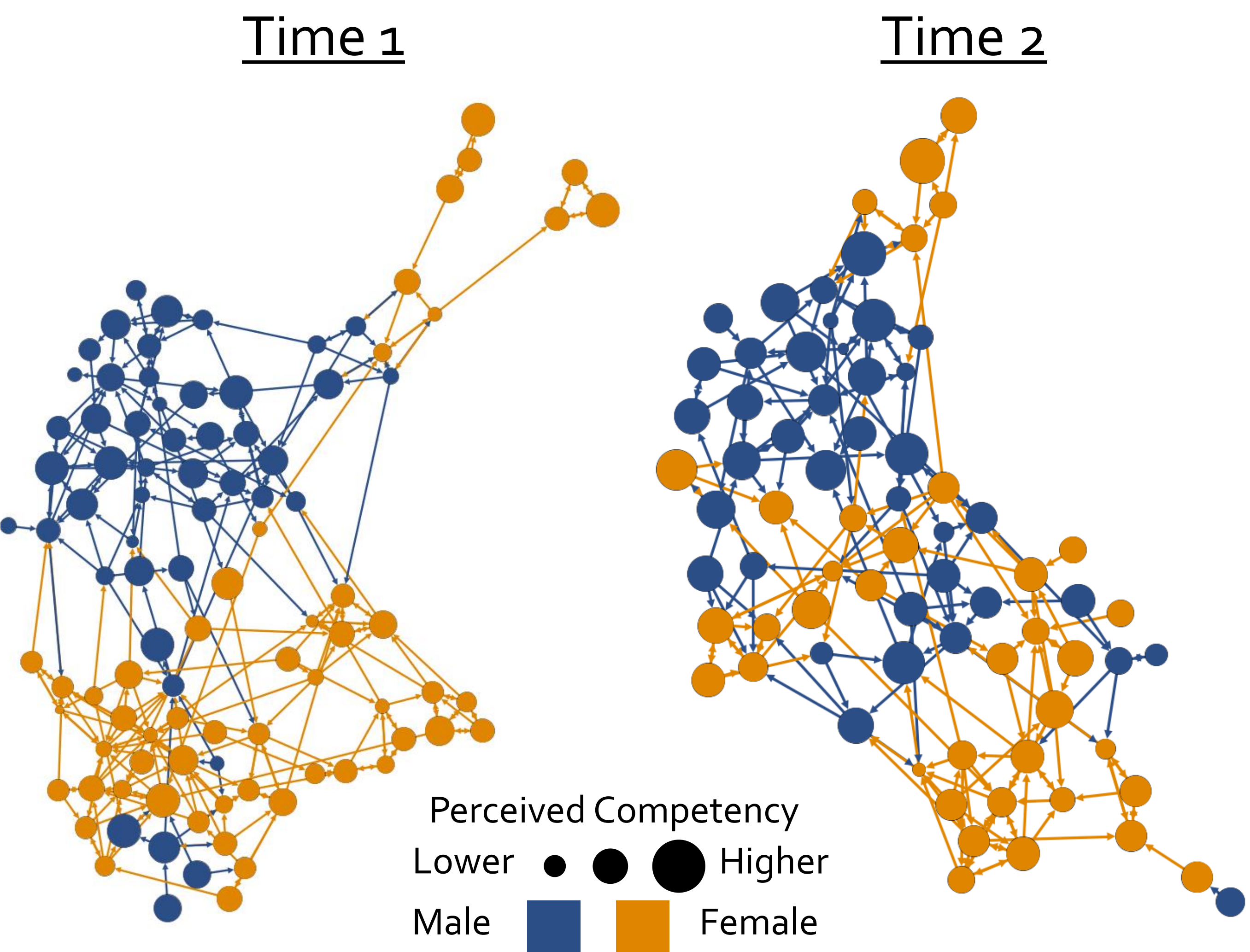
Perceived PA competency was significantly associated with friend’s scores



Older adolescents perceived themselves to be more competent

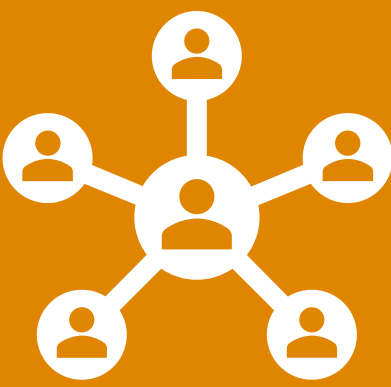


Difference between settings was statistically significant in Time 1: $F(4,396)=8.42$, $p<.01$ but not in Time 2: $F(4,304)=1.89$, $p=.11$



Perceived Competency
Lower ● ● ● Higher
Male ■ ■ Female ■ ■

Conclusions



Adolescents who are friends tend to have similar levels of perceived PA competence



Consider use of group or collaborative skill competency improvement activities; possibly pairing adolescents with differing skill competencies during skill-associated activities

