Life Skills Development and Well-Being in Physical Education: The Role of the Teaching Climate

Edge Hill University

LORCAN CRONIN – EDGE HILL UNIVERSITY
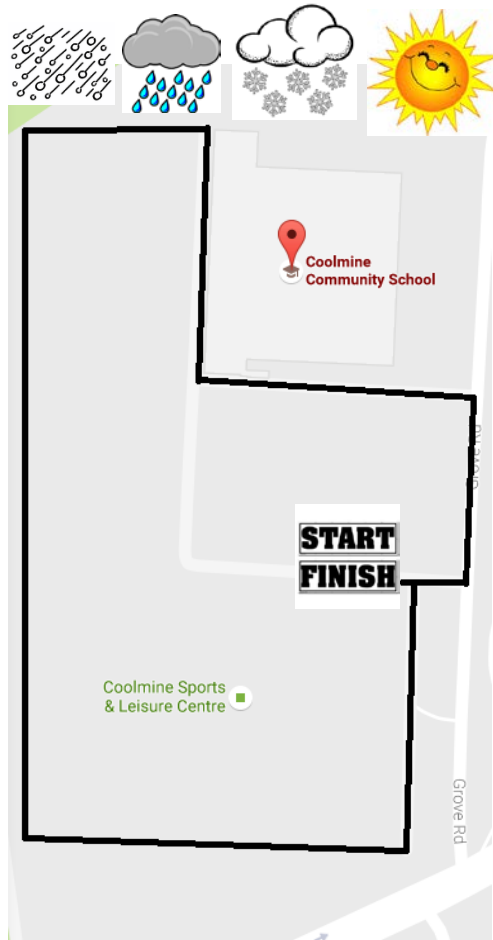
JUSTINE ALLEN – UNIVERSITY OF STIRLING

CLAIRE MULVENNA – UNIVERSITY OF BOLTON

PAUL RUSSELL – PROFESSIONAL GAME MATCH OFFICIALS LTD.

Introduction

Is physical education (PE) of benefit to young people?

Introduction

- Throughout the world, the personal development of students is seen as a key curricular aim of PE (Hardman, 2011)

- PE has been proposed as an ideal setting for the development of life skills (Goudas, 2010)

- **Certain types of PE** can help young people develop the following life skills: teamwork, goal setting, communication, social skills, leadership, problem solving and decision making (Dyson, Griffin, & Hastie, 2004; Smither & Zhu, 2011; Goudas & Giannoudis, 2008)

Introduction

- PE also has a positive effect on young people's psychological well-being (Bailey, 2012)

- Teachers play a key role in young peoples' development within PE (Bailey et al., 2013)

- **Purpose of this study:** investigate the relationships between the teaching climate, participants' life skills development within PE, and their psychological well-being

Benson & Saito's (2001) Framework

Teaching Climate

- Teacher autonomy support

Life Skills Development

- Teamwork
- Leadership
- Communication
- Social skills
- Goal setting
- Time management
- Problem solving
- Emotional skills
- **Total life skills**

Psychological Well-Being

- Self-esteem
- Positive affect
- Satisfaction with life

Method

Participants

294 PE Students aged 11–18 years (M_{age} = 13.7 years)

Males (n = 204) & females (n = 90)

Average of 2.4 hours of PE per week

37% played sport outside of PE

Measures

Teacher autonomy support – Sport Climate Questionnaire (Deci, 2001)
- 6-item version

	Strongly disagree			Neutral			Strongly agree
I feel that my teacher provides me with choices and options.	1	2	3	4	5	6	7
I feel understood by my teacher.	1	2	3	4	5	6	7

Alpha coefficients = .95

Measures

Life skills development – Life Skills Scale for Sport (Cronin & Allen, 2017)
- 43 items assessing the eight life skills listed earlier

PE classes have taught me to…	Not at all	A little	Some	A lot	Very much
Work well within a team/ group	1	2	3	4	5
Set specific goals	1	2	3	4	5
Speak clearly to others	1	2	3	4	5
Organise team/group members to work together	1	2	3	4	5

Alpha coefficients = .87 to .97
Factorial validity = supported via CFA, ESEM and bifactor analysis

Measures

Self-esteem – Self-Description Questionnaire II (Marsh et al., 1985)

- 10 items

	False	Mostly false	More false than true	More true than false	Mostly true	True
Most things I do, I do well.	1	2	3	4	5	6

Positive affect – PANAS (Watson et al., 1988)

- 10 items

	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
In general, I feel...					
Interested	1	2	3	4	5

Satisfaction with life – Satisfaction With Life Scale (Diener et al., 1985)

- 5 items

	Strongly disagree	Disagree	Slightly disagree	Neither agree or disagree	Slightly agree	Agree	Strongly agree
I am satisfied with life	1	2	3	4	5	6	7

Alpha coefficients = .84 to .93

Results

Mean Scores

Teacher autonomy support

	Strongly disagree			Neutral			Strongly agree
	1	2	3	4	★ 5	6	7

	Not at all	A little	Some	A lot	Very much
Teamwork	1	2	3 ★	4	5
Communication	1	2	3 ★	4	5
Social skills	1	2	3 ★	4	5
Leadership	1	2	3 ★	4	5
Goal setting	1	2	3 ★	4	5
Time management	1	2	★	4	5
Problem solving	1	2	★3	4	5
Emotional skills	1	2	★ 3	4	5
Total life skills	1	2	3 ★	4	5

Mean Scores

	False	Mostly false	More false than true	More true than false	Mostly true	True
Self-esteem	1	2	3	4 ★	5	6

	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Positive affect	1	2	3 ★	4	5

	Strongly disagree	Disagree	Slightly disagree	Neither agree or disagree	Slightly agree	Agree	Strongly agree
Life satisfaction	1	2	3	4	5 ★	6	7

Mediation (All Life Skills)

β range = .19 to .29

Teamwork
Goal setting
Time management
Emotional skills

Teacher autonomy support

Self-esteem

Positive affect

Communication
Social skills
Leadership
Problem solving

Satisfaction with life

β range = .21 to .34
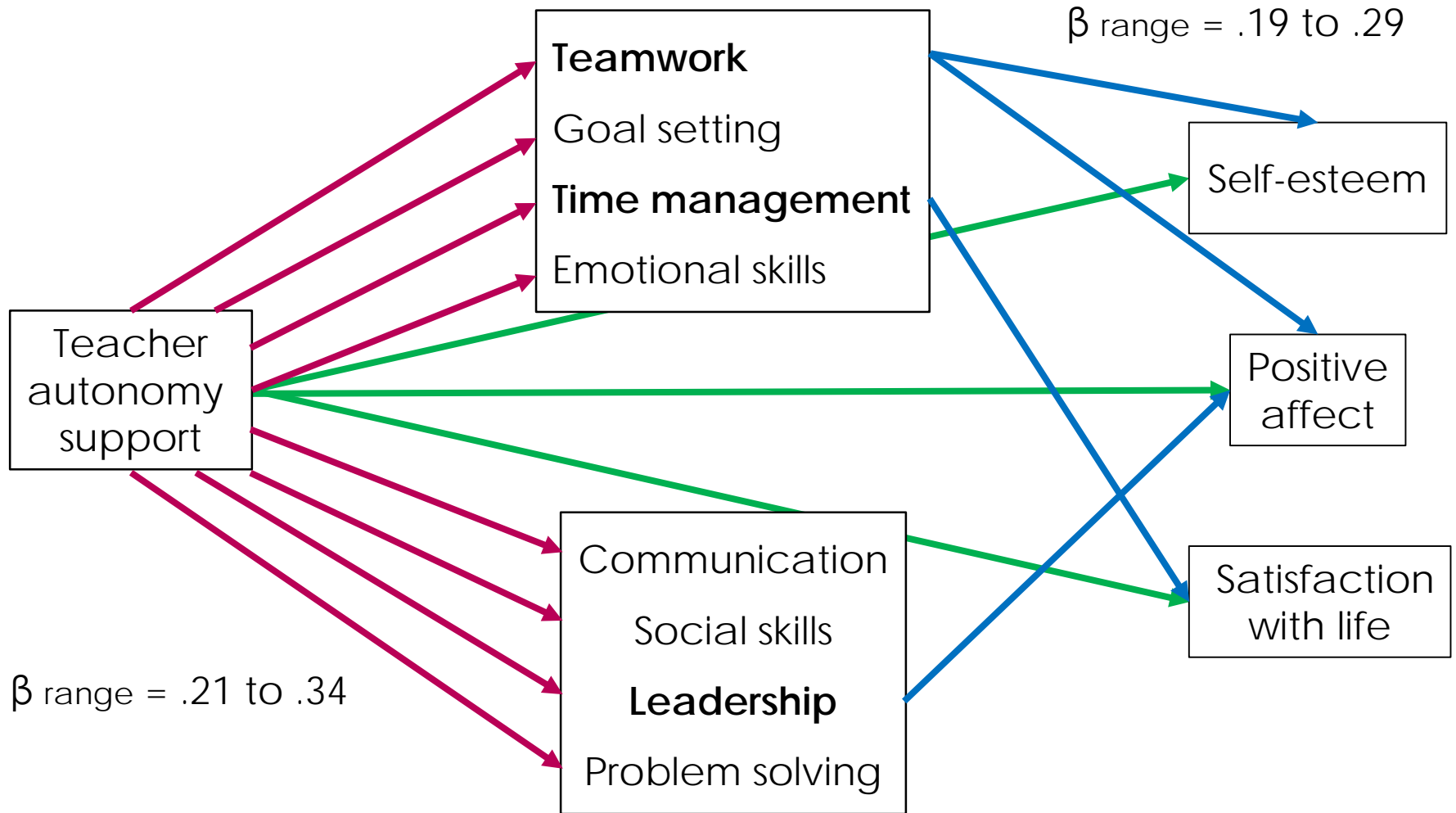
Mediation (Total Life Skills)

Total life skills

Teacher autonomy support

Self-esteem

Positive affect

Satisfaction with life

β = .28

β = .19

β = .64

β = .38

β range = .13 to .27
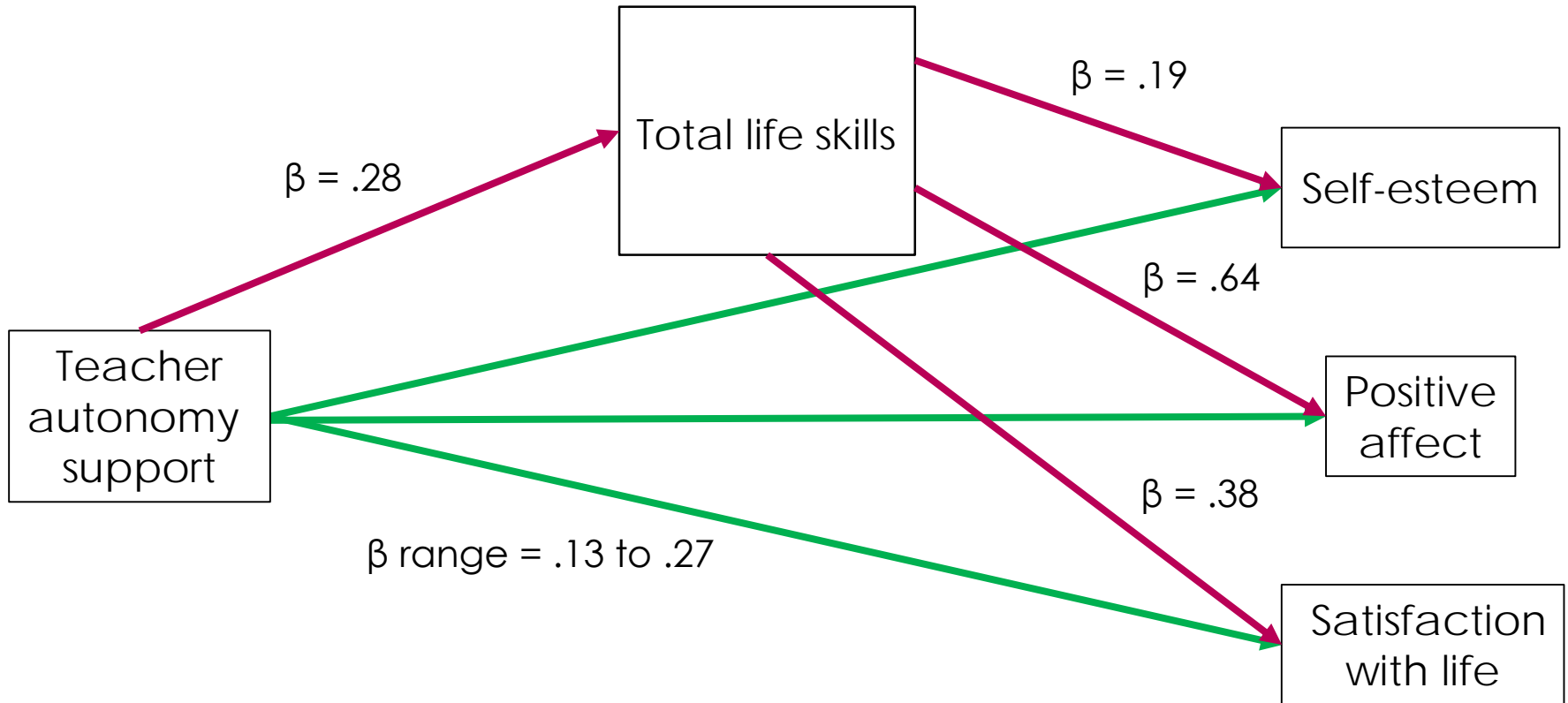
Total life skills mediated the relationships between teacher autonomy support and self-esteem, positive affect, and satisfaction with life

Discussion

Key Findings

- PE allows students to develop 'some' life skills
- Teacher autonomy support is related to student's life skills development and psychological well-being
- Total life skills development is related to student's psychological well-being

Practical Application

- Teachers should provide students with choice in PE, listen to their opinions, allow them to work independently, etc.
- Teachers should strive to develop multiple life skills in their students

Limitations

- Causality could not be established
- Uneven gender split

Future Research

1. Longitudinal Studies

2. Life Skills Programmes

3. Other Areas

Questions

Thank you for listening!

For those interested in collaborating on future projects, contact me at: Lorcan.Cronin@edgehill.ac.uk

References

o   Bailey, R. (2012). Physical education and sport in schools: A review of benefits and outcomes. *Journal of School Health, 76*(8), 397–401.

o   Bailey, R., Hillman C., Arent, S., & Petitpas, A. (2013). Physical activity: An underestimated investment in human capital. *Journal of Physical Activity and Health, 10*(3), 289–308.

o   Benson, P., & Saito, R. (2001). The scientific foundations of youth development. In P. L. Benson, & K. J. Pittman (Eds.), Trends in youth development: Visions, realities and challenges (pp. 135–154). Norwell, MA: Kluwer Academic.

o   Cronin, L., & Allen, J. (2017). Development and initial validation of the Life Skills Scale for Sport. *Psychology of Sport and Exercise, 28*, 105–119.

o   Dyson, B., Griffin, L., & Hastie, P. (2004). Sport education, tactical games, and cooperative learning: Theoretical and pedagogical considerations. *Quest, 56*(2), 226–240.

o   Goudas, M. (2010). Prologue: A review of life skills teaching in sport and physical education. *Hellenic Journal of Psychology, 7*, 241–258.

o   Goudas, M., & Giannoudis, G. (2008). A team-sports-based life-skills program in a physical education context. *Learning and Instruction, 18*(6), 528–536.

o   Smither, K., & Zhu, X. (2011). High school students' experiences in a sport education unit: The importance of team autonomy and problem-solving opportunities. *European Physical Education Review, 17*(2), 203–217.

CFA, ESEM & Bifactor Analysis

Table A

Indices of Model Fit for the Life Skills Scale for Sport

Model	χ^2	df	χ^2 / df	RMSEA	CFI	TLI	AIC	BIC	ABIC
CFA – Eight-factor model	1548.21***	832	1.86	.05	.93	.92	31653	32231	31733
CFA – Second-order model	1637.02***	852	1.92	.06	.92	.92	31702	32206	31772
CFA – First-order model	3692.69***	860	4.29	.11	.72	.70	33741	34216	33807
CFA – Bifactor model	1506.46***	817	1.84	.05	.93	.92	31641	32275	31729
ESEM	1042.10***	587	1.78	.05	.95	.93	31637	33117	31843
H-ESEM	943.62***	608	1.55	.04	.96	.94	31618	33021	31813
ESEM – Bifactor model	861.52***	552	1.56	.04	.96	.94	31584	33194	31808

Note. N = 294. RMSEA = root mean square error of approximation; CFI = comparative fit index; TLI = Tucker-Lewis index; AIC = Akaike information criterion; BIC = Bayesian information criterion; ABIC = Sample size adjusted BIC. *p < .05. **p < .01. ***p < .001.

Gender & Age Group Differences

➢ Series of MANOVAs conducted to compare gender (male versus female) and age group differences (11-14 year olds versus 15-18 year olds)

➢ Females significantly higher on all eight life skills, whereas they were lower on self-esteem and satisfaction with life

➢ Younger participants significantly higher for all eight life skills and for positive affect

➢ We controlled for gender and age grouping in all analyses

Complete Results

Table 1

Summary of Intercorrelations, Scale Ranges, Mean Scores, Standard Deviation, and Reliability Coefficients

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Teacher autonomy	-												
2. Teamwork	.45***	-											
3. Goal Setting	.41***	.65***	-										
4. Time management	.49***	.57***	.68***	-									
5. Emotional skills	.44***	.45***	.56***	.67***	-								
6. Communication	.50***	.57***	.53***	.66***	.63***	-							
7. Social skills	.41***	.63***	.59***	.59***	.63***	.64***	-						
8. Leadership	.53***	.68***	.65***	.71***	.66***	.73***	.74***	-					
9. Problem solving	.45***	.61***	.65***	.69***	.69***	.62***	.66***	.75***	-				
10. Total life skills	.56***	.79***	.82***	.83***	.79***	.80***	.83***	.90***	.85***	-			
11. Self-esteem	.15*	.24***	.19**	.07	.06	.11	.11	.17**	.08	.16**	-		
12. Positive affect	.46***	.56***	.52***	.54***	.49***	.54***	.52***	.61***	.52***	.65***	.43***	-	
13. Life satisfaction	.22***	.27***	.20**	.26***	.13*	.20***	.23***	.28***	.19**	.27***	.32***	.36***	-
Scale range	1–7	1–5	1–5	1–5	1–5	1–5	1–5	1–5	1–5	1–5	1–6	1–5	1–7
Mean score	4.80	3.50	3.09	3.00	2.79	3.35	3.29	3.21	2.95	3.18	4.22	3.52	5.03
Standard deviation	1.54	.77	1.02	1.18	1.22	1.08	1.07	.97	1.07	.85	.97	.90	1.27
Cronbach's Alpha	.95	.87	.93	.92	.90	.87	.90	.93	.91	.97	.84	.93	.85

Note. $N = 294$.

$*p < .05, **p < .01, ***p < .001$

Complete Results (cont.)

Table 2

Indirect Effects of Teacher Autonomy Support on Psychological Well-being (Self-esteem, Positive Affect and Satisfaction With Life) Through Each Mediator

	Bootstrap effect	Normal effect	Normal theory tests			95% CI
			SE	z	p	
Self-esteem						
Total effect	.06					[.01, .11]
Teamwork	.06	.06	.02	2.48	.0130	[.02, .11]
Goal setting	.04	.04	.02	1.67	.09	[-.005, .08]
Time management	-.02	-.02	.03	-.73	.47	[-.07, .03]
Emotional skills	-.01	-.01	.02	-.57	.57	[-.06, .03]
Communication	.00	.00	.03	.08	.93	[-.05, .05]
Social skills	.00	.00	.02	-.05	.96	[-.04, .04]
Leadership	.04	.05	.03	1.26	.21	[-.03, .12]
Problem solving	-.05	-.04	.03	-1.91	.06	[-.11, -.004]
Model	$F(3, 288) = 10.70***, R^2 = .10$					
Positive affect						
Total effect	.19					[.14, .25]
Teamwork	.04	.04	.02	2.57	.01	[.01, .09]
Goal setting	.01	.01	.02	.83	.41	[-.02, .05]
Time management	.03	.03	.02	1.65	.10	[-.002 .07]
Emotional skills	.01	.01	.02	.67	.50	[-.02, .05]
Communication	.03	.03	.02	1.35	.18	[-.02, .07]
Social skills	.02	.02	.02	.97	.33	[-.02, .05]
Leadership	.06	.06	.03	2.37	.02	[.009, .12]
Problem solving	-.01	-.01	.02	-.69	.49	[-.05, .02]
Model	$F(3, 288) = 31.35***, R^2 = .25$					
Satisfaction with life						
Total effect	.12					[.04, .21]
Teamwork	.04	.04	.03	1.41	.16	[-.01, .11]
Goal setting	-.02	-.02	.03	-.83	.41	[-.09, .03]
Time management	.10	.09	.04	2.72	.01	[.04, .17]
Emotional skills	-.06	-.06	.03	-1.87	.06	[-.13, .02]
Communication	-.02	-.02	.03	-.45	.65	[-.09, .05]
Social skills	.04	.04	.03	1.55	.12	[-.01, .10]
Leadership	.06	.06	.05	1.34	.18	[-.04, .16]
Problem solving	-.04	-.04	.03	-1.08	.28	[-.11, .03]
Model	$F(3, 288) = 9.00***, R^2 = .09$					

Note. $N = 294$. Bootstrap generated confidence intervals. CI = confidence interval.
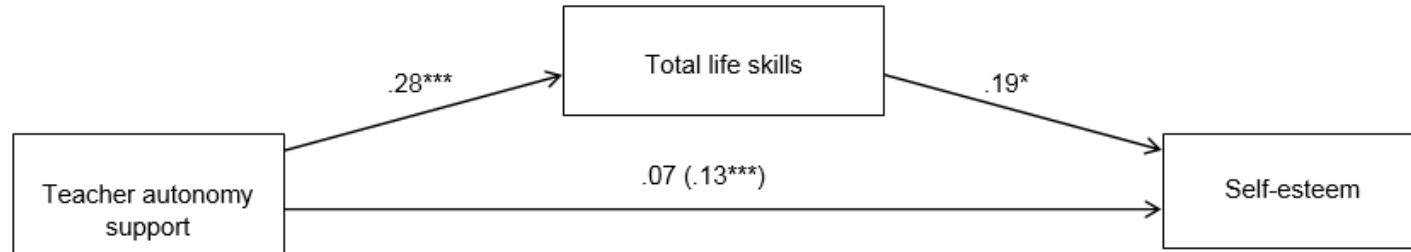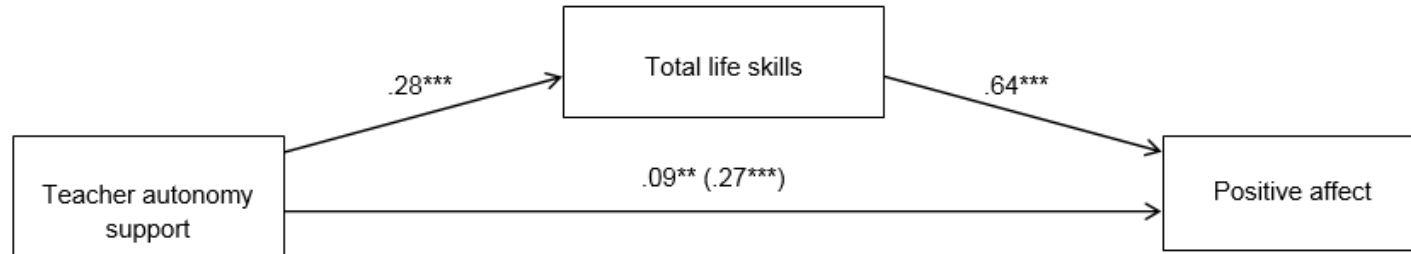
$***p < .001$

Complete Results (cont.)
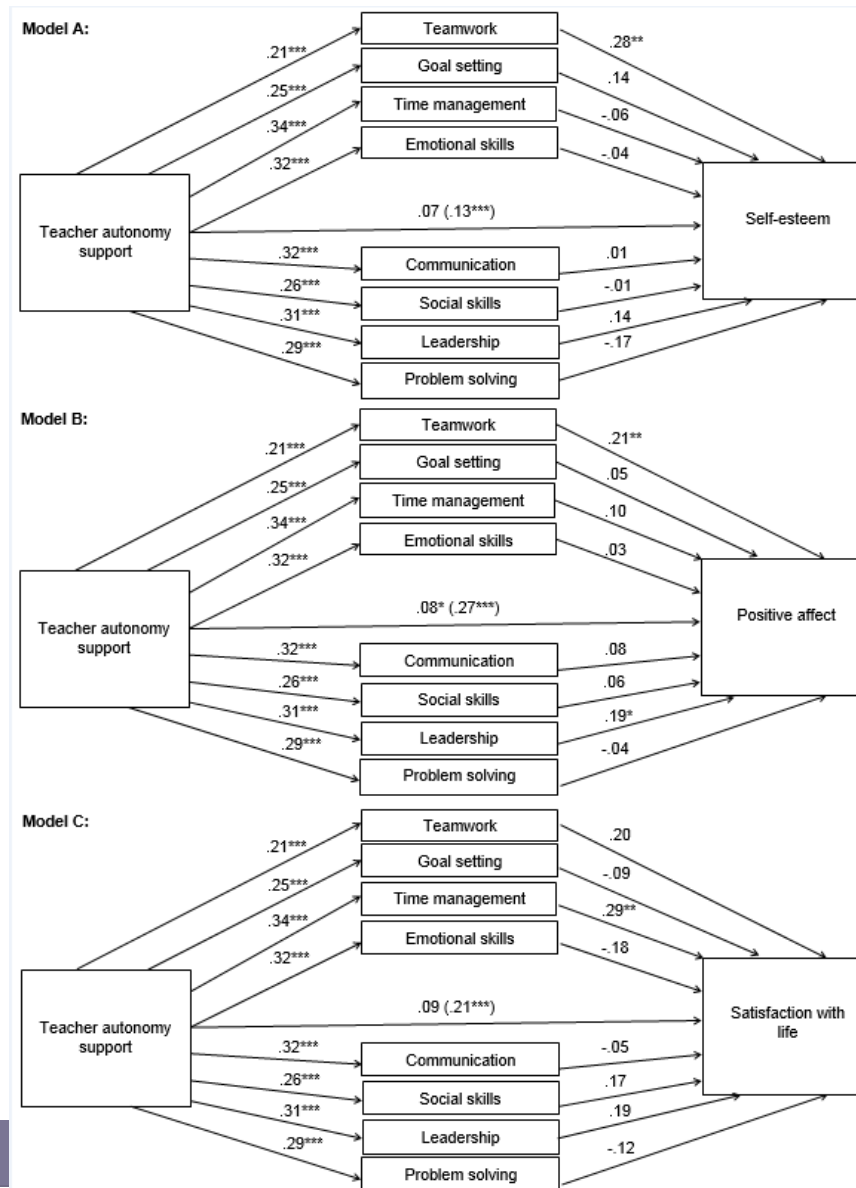
Complete Results (cont.)

Model A:

Model B:

Model C: