Effect of basic psychological needs satisfaction on attentional states of pupils in Physical Education

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INTRODUCTION

- Previous studies have underlined the increasing difficulty in maintaining adequate concentration levels among children and adolescents.
- Basic Psychologicals Needs (BPN) could indirectly predict pupils' concentration in PE.
- The purpose of this study was to analyse the relationship between the Basic Psychological Needs (BPN) satisfaction and the pupils' attentional states in PE context .

METHODS

Participants and procedure:
- 426 high school pupils (M_{age} = 15.36 years; SD_{age} = .82 years) from 21 class.
- After a PE exercise including instructions, each pupil filled questionnaires.

Measures:
- BPN satisfaction was assessed using three scales (Gillet et al., 2008) measuring the satisfaction of autonomy need (SAUTO), competence need (SCOMP), and relatedness need (SRELA).
- Attentional states were measured with the Exercise Attentional Questionnaire (validation in process), including four dimensions: "concentration on the task" (CTASK), "distraction on the task" (DTASK), "concentration through teacher support" (CTEACH), and "distraction through teacher support" (DTEACH).

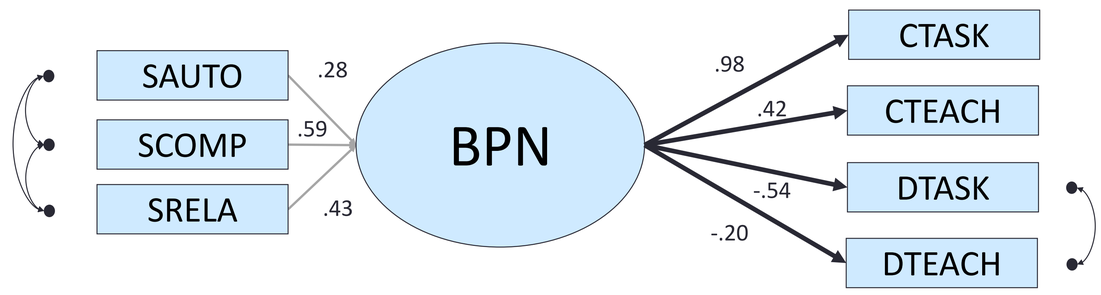
Statistical Analysis (*SPSS 22 & Amos):*
- Linear regressions and Structural Equation Modeling (SEM) were realised in order to understand the relationships.
- Intra-Class Correlations (ICC) were calculated to analyse the influence of the factor class.
- Multi-level regressions were realised to understand relationships controlling class effect

RESULTS

Linear regressions

SAUTO	***	CTASK	*Ajusted R^2 = .076 ; β = .280*
SAUTO	**	CTEACH	*Ajusted R^2 = .021 ; β = .152*
SAUTO	*	DTASK	*Ajusted R^2 = .013 ; β = - .123*
SAUTO	n.s	DTEACH	
SCOMP	***	CTASK	*Ajusted R^2 = .330 ; β = .576*
SCOMP	***	CTEACH	*Ajusted R^2 = .030 ; β = .179*
SCOMP	***	DTASK	*Ajusted R^2 = .121 ; β = - .351*
SCOMP	*	DTEACH	*Ajusted R^2 = .007 ; β = - .099*
SRELA	***	CTASK	*Ajusted R^2 = .172 ; β = .418*
SRELA	***	CTEACH	*Ajusted R^2 = .072 ; β = .272*
SRELA	***	DTASK	*Ajusted R^2 = .058 ; β = -.245*
SRELA	n.s	DTEACH	

Structural Equation Modeling



p	*χ2*	*df*	*GFI*	*AGFI*	*RMR*	*SRMR*	*RMSEA*	*LO90*	*HI90*	*NFI*	*TLI*	*CFI*	*χ2/df*	*AIC*
.027	20	10	.987	.963	.058	.028	.049	.016	.080	.975	.973	.987	2	56

Linear mixed model

		VI			
	(ICC)	SAUTO (27%)	SCOMP (4%)	SRELA (12%)	SAUTO*SCOMP*SRELA
VD	CTASK (9%)	*** 1342_a $.037_b$ $.027_c$	*** 1205_a $.483_b$ $.033_c$	*** 1295_a $.352_b$ $.037_c$	*** 1275 $.008_b$ $.001_c$
	CTEACH (10%)	** 1491_a $.143_b$ $.045_c$	*** 1487_a $.173_b$ $.046_c$	*** 1468_a $.265_b$ $.045_c$	*** 1474 $.005_b$ $.001_c$
	DTASK (7%)	* 1585_a $-.129_b$ $.050_c$	*** 1535_a $-.379_b$ $.049_c$	*** 1565_a $-.265_b$ $.051_c$	*** 1564 $-.005_b$ $.001_c$
	DTEACH (2%)	n.s	* 1404 $-.086_b$ $.042_c$	n.s	n.s

*Note: $a_{=}$ - 2 Log ; b = Estimate ; c = Standard Error ; ns = p >.05 ; * = p < .05 ; ** = p < .01 ; *** p < .001*

SUMMARY AND CONCLUSIONS

- BPN satisfaction is related to attention during a PE exercise.
- The competence need satisfaction seemed the most related to pupils' attentional states.
- PE teachers should support BPN trough a positive motivational climate, and especially the the competence need.
- Futures analyses will be performed using Multilevel Structural Equation Modelling (MSEM).

ACKNOWLEDGMENTS

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