

# QUANTITATIVE AND QUALITATIVE CHARACTERISTICS OF MOTIVATION IN THE FIELD OF PHYSICAL EDUCATION AND SPORTS

István SOÓS<sup>1,\*</sup>, Iulianna BOROS-BALINT<sup>2</sup>, Pál HAMAR<sup>1</sup>

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**ABSTRACT. Introduction:** Learning the quantitative and qualitative characteristics of motivation provides important information for understanding the behavior in physical education and sports in young people. Sage (1977) describes motivation as one's effort towards certain activities and its intensity. Motivation is deeply rooted in the individual based on Vallerand's (1987) hierarchical model, and its type (intrinsic versus extrinsic motivation) can change during the activity, as well as sometimes remains hidden. **Method:** Four hundred and nine students took part in our research, whose average age was 15.0 years. In addition to the questionnaire based on the Theory of Planned Behavior (TPB), research participants filled out the Behavior Regulation in Exercise Questionnaire (BREQ-2) regarding to the Self-Determination Theory (SDT). Respondents also reported the support they received from their social environment for physical activity, as well as what their future intentions were and how their past behavior and current behavior have developed. Data analysis was performed by employing IBM SPSS v. 25 and AMOS v. 24 software packages. **Results and conclusions:** In our study social support influenced young people's intention to perform physical activity as a current behavior. According to the Trans-Contextual Model (TCM) results revealed how autonomous motivation transfers across contexts (e.g., from school/education to free living) and therefore explained how leisure time behavior is reinforced. Our data confirmed the strongest positive relationship between students' past behavior and current behavior followed by a moderate relationship in students' past behavior and intention. Thus, the relationship between past behavior and current behavior was also moderate. Results have implications beyond physical activity, and can help understanding

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<sup>1</sup> Department of Pedagogy, Hungarian University of Sports Science, Budapest, Hungary

<sup>2</sup> Department of Kinetotherapy and Theoretical Disciplines, Babeş-Bolyai University, Cluj-Napoca, Romania

\* Corresponding author: soos.istvan@tf.hu

of why young people make a range of choices related to health. Results can also aid the development of educational materials and practical methods to motivate young people to choose a healthy, physically active lifestyle. **In conclusion**, from a school context to leisure time can help educational and health practitioners to understand what influences health-related physical activity behaviors in young people. Physical education classes are supposed to instill behaviors and attitudes that promote physical activity in free-time and promote healthy lifestyle. Nevertheless, according to our findings, the expected function of physical education in schools fails to meet the criteria that lead to developing self-determined or autonomous motivation to young students' leisure time intention, and especially physical activity.

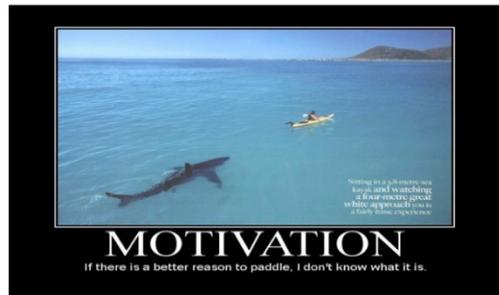
**Key words:** *Motivation, qualitative, quantitative, students, physical education*

## Introduction and rationale

Ford (1992) thirty years ago introduced 32 theories of human motivation in her book. She also described the role of beliefs in personal actions as well as how goals and emotions influence individuals' motivated behaviours.

Learning the quantitative and qualitative characteristics of motivation provides important information for understanding the behavior in physical education and sports in young people. Sage (1977) describes motivation as one's effort towards certain activities and its intensity. Motivation is deeply rooted in the individual according to Vallerand's (1997) hierarchical model that was developed 25 years ago. Its type (intrinsic versus extrinsic motivation) can change during the activity, as well as sometimes remains hidden. It also depends on personality (global level of motivation), on context (e.g. sports activities in PE, learning at schools or situations (e.g. the importance of a specific sports competition or an exam situation, etc.).

Please see an example below of how intrinsic motivation (paddling for enjoyment) can change to extrinsic motivation (paddling for life saving).



Internationally, we can come across different approaches, and quite a few publications comparing cultures write in support of the pedagogical benefits of a favorable motivational atmosphere (e.g. task orientation in physical education at school) or of the freedom of decision and the supportive effect of the social environment in the sense that these with the help of motivational effects. It is possible to prevent the individual from becoming a habit of a sedentary lifestyle (sedentary behavior), which is especially important in adolescence (Biddle, Soós & Chatzisarantis, 1999). Not only the degree of motivation, but also its orientation and type play an important role in the spread of a physically active and healthy lifestyle among young people. The consolidation of internal regulation during the teenage years is a good indicator that the individual will most likely remain physically active for the rest of his life. Motivation means an individual's internal need, which begins with intention, and the more it becomes a determination, consequently enhancing the motive.

The motivational ladder for the individual: in addition to praise, he/she also receives sports equipment - praise and rewards -; earn discounts with prizes or camp for free; may appear in a newspaper; the method of emotional influence, the awakening of the conscience; activating a sense of responsibility or as an example - "You are capable of it, you can do it!" - the power of words, personalized, appropriate sentences. In order to achieve someone's goal, stricter behavior is necessary; someone can get the most out of themselves based on objective data; someone needs words of support. Group and individual discussion - short-term and long-term familiarization and acceptance of the realistically achievable goals of the community and the individual; good community, friendly relations; involving more experienced and successful athletes; setting goals, setting sub-goals and/or short, medium and long term goals. It should be possible, for example, to have a "challenge", when only one (partial) distance has to be completed, but within a specified time. If they are afraid of the challenge, we can ask them to fight not only for themselves, but also for others, for example their peers or even their parents (Hamar and Mocsai, eds., 2019). Young people should be considered partners, they can be involved in the planning of physical training, naturally under control, which means that, for example, the physical educator or the parent creates the framework within which they can move. Often it is enough to just listen to them and they can tell us about their real or perceived problems. Another motivational method is to observe what young people like and what they don't like during exercise, and at the same time to get information about them from their parents, family members and friends (autonomy support). Motivation is also considered the arousal of desires for an activity; the set of procedures and methods for training, learning, physical training or even competition; as well as the atmosphere which ensures that the young people, nourished by their inner need, successfully carry out their tasks with

adequate courage and self-confidence. In addition to arousing the internal demand, the means of motivation is also encouragement from the teacher or parent, on the one hand when setting goals, and on the other hand in the process of achieving performance. After achieving the set goals and results, higher-level demands, the formation of attitudes, and the mobilization of greater energies for health-supporting exercise or performance enhancement follow (Hamar and Mocsai, eds., 2019). Motivational theories have undergone tremendous development. For example, Franken (1998) found that motivation is related to arousal, orientation, and persistence of behavior. Motivation can be controlled by both external and internal driving forces (drives). In early motivational research, instincts, needs and drives were the factors of human behavior regulation. This represented a mechanistic view, and the main focus was on homeostasis, i.e. the stability-maintaining mechanism. Early theories were concerned with reducing arousal, protecting the self, and meeting needs, while human capacity for the self or self-regulation was not considered relevant. Concepts of motivation were later linked to cognitive theories, such as rational levels of decision as opposed to emotions and desires (Ford, 1992). The role of self-evaluation thoughts increased, the central question became the quality of motivation (e.g. the process of increasing and transforming motivation, shaping behavior, and the hope of success and perfection). Cognitive (learning theory) explanations were based on expectations, causal attributions and locus of control. Even today, primarily in Western cultures, the cognitive direction is the dominant approach, although it is often combined with the evaluation of different emotional processes. Among the earlier mentioned thirty-two motivational theories described by Ford (1992), some motivational theories play a particularly important role in research related to physical activity and sports, such as achievement motivation or achievement goal orientation theory (Achievement Goal Orientation Theory; Nicholls, 1984). The two parts of the theory are task-centric orientation and egocentric orientation. In addition to this theory, the Self-Determination Theory and Theory of Planned Behavior are the other most commonly used approaches in sports-related studies.

The aim of our study was to develop a model (Soós et al., 2019) that will be able to explain the relationships between different motivational factors that can determine health-related physical activity behaviors.

## **Method**

Three hundred and eighty-nine Hungarian and one hundred and eighty-three Romanian students took part in our research, whose average age was 15.1 years. In addition to the questionnaire based on the Theory of Planned Behavior (TPB), research participants filled out the Behavior Regulation in

Exercise Questionnaire (BREQ-2) regarding to the Self-Determination Theory (SDT). Respondents also reported the support they received from their social environment for physical activity, as well as what their future intentions were and how their past behavior and current behavior have developed. Data analysis was performed by employing IBM SPSS v. 25 and AMOS v. 24 software packages.

## Results

In our study social support influenced young people’s intention to perform physical activity as a current behavior. According to the Trans-Contextual Model (TCM; Figure 1) that comprises SDT and TPB as well, results revealed how autonomous motivation transfers across contexts (e.g., from school/education to free living) and therefore explained how leisure time behavior is reinforced. Our data confirmed the strongest positive relationship between students’ past behavior and intention followed by a moderate relationship in students’ past behavior and attitude. The relationship between past behavior and current behavior was also moderate (Table 1). Results have implications beyond physical activity, and can help understanding of why young people make a range of choices related to health. Results can also aid the development of educational materials and practical methods to motivate young people to choose a healthy, physically active lifestyle.

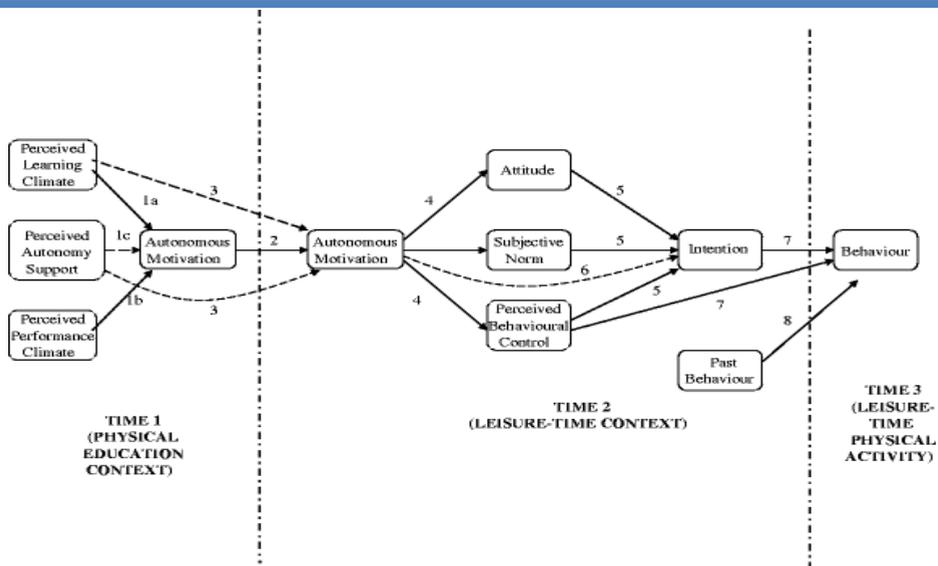


Figure 1. Trans-contextual model

**Table 1.** Descriptive statistics and intercorrelations among the trans-contextual model components

Factor	M	SD	1	2	3	4	5	6	7	8	9	10
1. PAS (PE Teacher)												
Hungarian	4.61	1.21										
Romanian	2.29	0.38										
2. Autonomous Motivation (PE)												
Hungarian	1.42	2.26	-.50**									
Romanian	1.10	1.86	-.06									
3. PAS (Peer)												
Hungarian	5.10	1.26	.23**	-.25**								
Romanian	4.91	1.16	-.23**	-.02								
4. PAS (Parent)												
Hungarian	5.48	1.14	.22**	-.27**	.72**							
Romanian	5.07	1.15	-.26**	-.01	.76**	-						
5. Autonomous Motivation (LT)												
Hungarian	7.05	5.07	.12*	-.41**	.38**	.42**						
Romanian	6.98	5.02	-.07	-.07	.32**	.31**						
6. Attitude												
Hungarian	5.81	0.88	.26**	-.28**	.54**	.64**	.42**					
Romanian	5.84	1.25	-.32**	-.02	.43**	.47**	.43**					
7. Subjective norm												
Hungarian	5.36	1.06	.18**	-.20**	.55**	.69**	.25**	.55**				
Romanian	5.09	1.12	-.20**	.12	.54**	.61**	.10	.41**				
8. PBC												
Hungarian	5.69	0.97	.23**	-.27**	.49**	.57**	.36**	.68**	.57**			
Romanian	5.81	1.31	-.17*	.10	.34**	.46**	.36**	.58**	.45**			
9. Intention												
Hungarian	5.41	1.50	.16**	-.27**	.50**	.51**	.41**	.41**	.49**	.34**		
Romanian	5.03	1.48	-.31**	.04	.36**	.39**	.35**	.54**	.39**	.47**		
10. Behaviour												
Hungarian	3.72	0.52	.09	-.04	.08	.05	.05	.02	.05	.10*	.09	
Romanian	3.73	0.65	-.04	.11	.03	.14*	-.03	.12	.12	.05	.11	
11. Past Behaviour												
Hungarian	3.58	1.51	.21**	-.25**	.40**	.38**	.30**	.40**	.36**	.32**	.60**	.13*
Romanian	3.58	1.43	-.17*	-.02	.23**	.21**	.24**	.36**	.29**	.28**	.53**	.28**

Note. For Hungarian sample, N = 389; Romanian sample, N = 183; PAS = Perceived autonomy support; PE = Physical Education context; LT = Leisure-Time context; PBC = Perceived behavioural control. \* $p < .05$ . \*\* $p < .01$ .

## Conclusion

In conclusion, from a school context to leisure time can help educational and health practitioners to understand what influences health-related physical activity behaviors in young people. Physical education classes are supposed to instil behaviors and attitudes that promote physical activity in free-time and promote healthy lifestyle. Nevertheless, according to our findings, the expected function of physical education in schools occasionally fails to meet the criteria that lead to developing self-determined or autonomous motivation to young students' leisure time intention, and especially physical activity. Further investigation is required to uncover the causes of this problem and possibly find a solution to deal with these issues in schools as well as other part of life.

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