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Original research paper

SELF-REGULATION FACTORS AS PREDICTORS OF ACADEMIC MOTIVATION IN ADULTS*

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A B S T R A C T

This paper focuses on the relationship between the factors of self-regulation and academic motivation in adults who are in the education system. A number of 1711 respondents from four Eastern European countries participated in the research: Czech Republic, Slovakia, Poland and Serbia. Self-regulation and academic motivation have long been recognized as factors in successful learning; however there is relatively little research on these concepts in adults. Two instruments were used in the research: Academic Motivation Scale (AMS-28) and the Self-Regulation Questionnaire (SRQ-27), which were translated from English into four languages. The survey was conducted in electronic format during the first three months of 2022. The results

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show that the three factors of self-regulation: self-control, decision-making and goal orientation are in positive correlation. Significant positive relationships were established between the dimensions of academic motivation, where the factor of a-motivation is negatively related to the factors of intrinsic and extrinsic motivation. All three researched factors of self-regulation are related to different aspects of internal and external motivation, as well as a-motivation. The research confirmed that the instruments used can be significant tools for researching self-regulation and academic motivation, as important determinants of readiness to learn in adults.

Key words:

adult learning, self-regulation, academic motivation.

■ INTRODUCTION

Adult education is intended for adults of various categories and target groups, so it is diverse in its outcomes, quality, content and the way it can be implemented. It can be done in different educational contexts: schools of different types and levels of organization, which can be formal and informal, companies, local communities, etc. There are also various terminological definitions of adult education or learning. For example, UNESCO defined adult education in a comprehensive way and affirmed it as a concept and practice that has no limitations in terms of content and methods of organization of learning (Despotović, 2016). In recent European Union terminology, the term adult education has been completely replaced by the term adult learning, which is defined as all forms of learning undertaken by adults after leaving initial education and instruction (including higher education) (Commission of the European Communities, 2006). The respondents in this cross-cultural research, which needed to harmonize different systems of adult education in four countries, were defined a little more broadly. Our sample consisted of adults aged 18 to 64 who are in the education system. Adult learning is different from that of children and young people. Some of the elements that differentiate children and adults are the purpose of learning, self-awareness, life experience, willingness to learn, and motivation. Although adult learning is often motivated by certain benefits (e.g. higher salary), success in learning is most closely related to the motive of personal development and improvement (Vizek Vidović & Vlahović Štetić, 2007). Just like the learning process of both children and adolescents, the ability to self-regulate is very important, especially when people undertake and manage this process independently.

Self-regulation refers to the processes by which the human psyche gains control over its functions, states and internal processes (Vohs & Baumeister, 2004). These processes are purposeful, deliberate and self-correcting.

There are numerous definitions and conceptualizations of self-regulation, and by reviewing the literature (Cheng, 2011; Feldman, 1996; Karoly et al., 2005; Wentzel, 2007) we can conclude that there are more similarities than differences between them. By reviewing the various definitions of self-regulation, we can conclude that these are systematic processes that include:

1. setting personal goals,
2. directing behavior according to set goals,
3. a feedback loop that serves to reduce the deviation between current and desired behavior, these loops referring to a cyclical process with the help of which students monitor the success of their learning methods and strategies,
4. the process of self-regulation includes cognitive, motivational, affective and cognitive components,
5. self-regulation includes processes such as setting goals, management, using feedback, and self-evaluation.

In the broadest sense, self-regulation can be defined as a deliberate, complex, purposeful process that leads to self-corrective adjustment of behavior in order to achieve set goals (Carver & Scheier, 2001). We can integrate self-regulation in the most diverse spectrum of behavior, such as self-regulation of emotions, motivation, and various cognitive processes. Thus, when it comes to learning in which the student (who can also be an adult) actively participates, undertakes and manages independently, we say that there is self-regulation in this process.

Self-regulation has cognitive, motivational and emotional components. According to one of the most influential models of the self-regulation process (Zimmerman, 2000, according to Sorić, 2014), motivational components or beliefs are found in the reflection phase, in addition to the performance and the self-reflection (self-judgment and self-reaction) phase. The self-reflection phase includes goal setting and strategic planning, which is associated with motivating beliefs such as self-efficacy, expectation of success, intrinsic interest, valuing the learning task, and goal orientation. The links between the constructs of self-determination theory and self-regulation of learning were empirically confirmed in a meta-analysis of research that dealt with the connection between motivation and self-regulation (Green & Azevedo, 2007, according to Sorić, 2014). Therefore, we can say that the theory of self-determination by Deci and Ryan (2000, 2019, 2020) contributed significantly to research into the relationship between motivation and self-regulation of learning. SDT or Self Determination Theory and is one of the most significant and comprehensive theories of motivation, which is also the basis of the instrument for measuring academic motivation in this research (AMS, Academic Motivation Scale). Scheme 1 shows a representation of the theory and continuum of self-determination. The theory of self-determination belongs to the category of motivational theories

that focus on the reasons for a person’s involvement in a certain activity, that is, they are theories that provide an answer to the question “Why do I do it?” (Sorić, 2014).

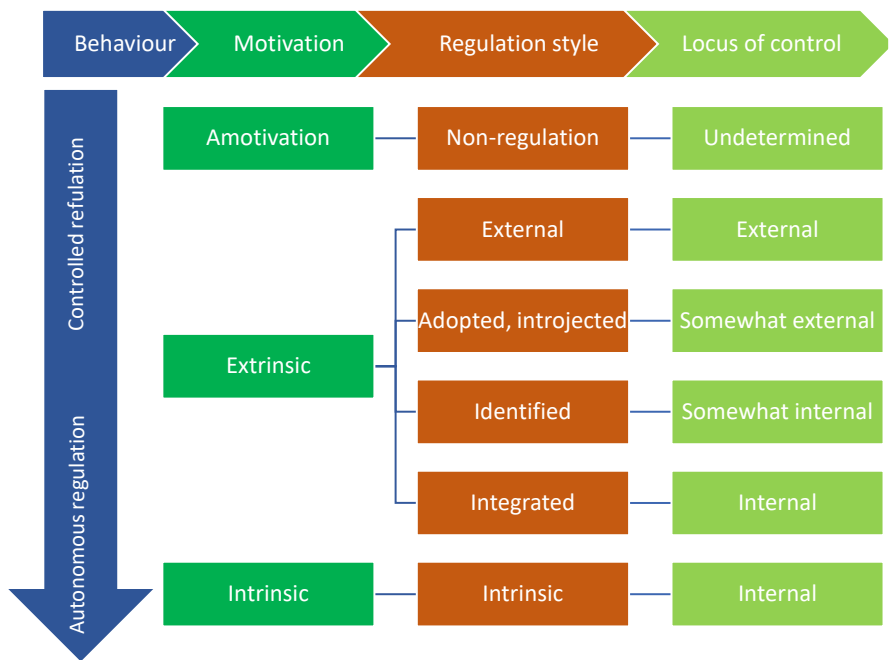


Diagram 1. Self-determination continuum
(adapted from: Ryan & Deci, 2020)

The left section shows the state of a-motivation, which describes people with a low level of self-determination, low autonomy, and a low sense of control, and on the opposite end there are people with a high level of self-determination, strong autonomy, and a high degree of control, people with internal motivation. Between them there are people with different levels of external motivation: external regulation, adopted or introjected regulation, identified regulation and integrated regulation. External regulation is the least autonomous, and a person behaves in a certain way in order to gain some reward or satisfy the demands and expectations of other people (Ryan & Deci, 2020; Šarčević, 2015). In introjected regulation, the way of thinking, behavior, and affective response stems from the environment, and the purpose of behavior is to receive social support. In identified regulation, the individual accepts the initially imposed activities as his own, recognizing their importance for personal, individual gain in the future context. Integrated regulation is the most self-determining form of extrinsic motivation. A person completely transforms identified values and behaviors into a self-concept (Ryan & Deci, 2000). Locus of control refers to the place where a person perceives the cause of a certain action. It can be extrinsic, where the person

believes that the cause is outside of themselves, or intrinsic, if the person believes that they are the initiator of the event.

According to Csikszentmihályi (Csikszentmihályi, 1978, 2020), intrinsic motivation is a state characterized by a very high level of commitment and it provides great satisfaction. It also refers to evoking positive emotions and losing track of time while undertaking a task or activity. This means that an individual who engages in an activity is completely free of fear and wants to do that activity again. In other words, activities become a goal and allow individuals to achieve satisfaction and a state known as “flow”. Extrinsic motivation is a state in which people may engage in an activity for external pressures or external gain, rather than because the task gives them pleasure or arouses their interest (Aronson et al., 2014). Extrinsic motivation is rightly associated with a system of punishments and rewards.

A-motivation is a lack of motivation. There is no extrinsic or intrinsic motivation. It is a state when people do not connect action and result. They are not motivated to take action, which is most often the result of a lack of self-efficacy and control over the action. They either do not perform or perform carelessly. Individuals may be convinced that their behavior or actions are driven by factors beyond their control (Deci & Ryan 1985; Vallerand, 2000; Vallerand et al. 1993). A-motivation arises from not valuing a given activity, not feeling competent to perform it, or believing that a given activity will not lead to desired goals (Ryan & Deci 2000).

Although there is no research on the relationship between academic motivation and self-regulation in a sample similar to ours, by reviewing the literature we can conclude that there are relationships between self-regulated learning and academic performance, academic motivation and learning (Ablard & Lipschultz, 1998; Boekaerts, 1997; Zimmerman, 2011; Zimmerman, 2015; Zimmerman & Kitsantas, 2005; Zimmerman & Schunk, 2008; Zimmerman & Schunk, 2011). Not only do self-regulated learning skills guide students' learning during school, but they also positively contribute to gaining knowledge after completing education (Boekaerts, 1997). Research has shown that self-regulated learning plays an important role in the academic success of students (Lončarić, 2014). Self-efficacy as a result of self-regulation correlates with motivation (Zimmerman, 2015). Self-efficacy is a belief in one's ability to succeed, and motivation is an individual's desire to succeed. Zimmerman (2011) states that self-regulation processes can be learned and can lead to increased student motivation and achievement. It was concluded that self-regulated learning competence strongly influences the student achievement levels, improving the relationship between motivation and performance. Students who are motivated to achieve a particular goal will engage in self-regulatory activities that they believe will help them achieve said goal. Self-regulation encourages learning, which leads to perception of greater competence, which maintains motivation towards the goal and future goals.

Based on the above, the following hypotheses were justified in the paper:

- 1. Subjects' self-regulation will be positively related to their intrinsic academic motivation.
- 2. Subjects' self-regulation will be positively related to their extrinsic academic motivation.
- 3. Subjects' self-regulation will be negatively related to their academic motivation.

METHODOLOGY

The main goal of this research was to determine the relationship between the dimensions of self-regulation and academic motivation in adult respondents in the educational process. When it comes to self-regulation factors, three dimensions are included: self-control, decision-making and goal orientation, while indicators of academic motivation consisted of seven dimensions – three related to internal motivation: motivation for knowledge, motivation for achievement and motivation for experiencing stimulation, three dimensions related to external motivation – identified regulation, introjected regulation and external regulation, as well as the dimension of amotivation.

The sample consisted of 1711 respondents in total, male and female, aged from 18 to 61 years ($AS=25.4$; $SD=7.25$). The respondents were from four countries: Czechia, Slovakia, Poland, and Serbia. The sample was appropriate, and the criterion for including respondents was their level of formal education at the time of the research, from undergraduate studies to doctoral studies. The distribution of the sample in relation to selected socio-demographic variables is shown in Table 1.

Table 1. Sample structure

Variable	Group	N	%
Age	18-29	1414	82.64
	30-39	173	10.11
	40-49	98	5.73
	50-64	26	1.52
Sex	Male	355	20.75
	Female	1356	79.25

Education level	High school	479	28.00
	Undergraduate studies	807	47.17
	Master studies	350	20.46
	Doctoral studies	75	4.38
Country	Czechia	514	30.04
	Slovakia	511	29.87
	Serbia	410	23.96
	Poland	276	16.13

The Academic Motivation Scale (AMS-C-28; Vallerand et al., 1993) was used to collect data on respondents' motivation for formal education. The scale contains a total of 28 items, offering answers to the question at the beginning of the scale: "Why are you in college?" Respondents express their degree of agreement with each item on a seven-point Likert scale, and the answers range from 'strongly disagree' to 'strongly agree'. Some answers are: "Because of the satisfaction I get from studying subjects that interest me", "Because I believe that a few additional years of education will improve my work ability", and "I don't know; I don't know what I'm doing at university." The validation of the scale was carried out in the research conducted by its authors (Vallerand et al., 1992) and the seven-factor structure of this scale was confirmed. Factors that make up the scale are: 1) factors of extrinsic (external) motivation: identified (identified) regulation, introjected (adopted) regulation and external regulation; 2) factors of intrinsic (internal) motivation: motivation for knowledge, motivation for achievement and motivation for stimulation and 3) factor of a-motivation. Confirmatory factor analysis was conducted on the sample of respondents in this research and the results confirm the original dimensionality of the instrument with seven independent factors, both on the entire sample (CFI=0.933, TLI=0.923, RMSEA=0.059), and on the sample of respondents from Serbia (Kočvarová et al., 2024). Cronbach's alpha for the entire instrument is 0.887 and for individual subscales: extrinsic motivation – identified (0.800), introjected (0.844) and external regulation (0.822); intrinsic motivation – motivation for knowledge (0.878), for achievement (0.835) and for the experience of stimulation (0.872); and a-motivation (0.861), which makes the instrument and all subscales reliable.

Data on the respondents' self-regulation was obtained using the Self-Regulation Questionnaire (SRQ-CZ; Gavora et al., 2015). The instrument called Self-Regulation Questionnaire SRQ-27 (used in the DANUBE project) was created from the Czech validation of the original Self-Regulation Questionnaire (SRQ) instrument developed by Brown, Miller and Lavendowski (Brown et al., 1999).

The instrument consists of 27 items, showing manifestations of a person's self-regulation, and the respondent should determine the extent to which each item applies to himself/herself on a five-point scale, with the answers ranging from "strongly disagree" to "strongly agree". Examples of items in the scale are: "I have a problem in decision making", "As soon as I see a problem or challenge, I start looking for a possible solution", "I learn from my mistakes", "I give up easily.". The results of the validation study (Vaculíková et al., 2022) indicated a three-factor structure of this instrument with the factors: Self-Control, Decision-Making, and Goal Orientation. The validation of the research's sample instrument confirms the three-factor solution of the instrument's dimensionality (Vaculíková et al., 2022). Cronbach's alpha indicates good reliability of the instrument and subscales, with the whole instrument having 0.873, while the reliability was measured by subscales: Self-control (0.863), Decision-making (0.769) and Goal orientation (0.763).

The back translation method was used to translate both instruments from English (Brislin, 1970, 1986). First, the instruments were translated into Serbian by the researcher and a professional translator. Then, an independent translator translated the instrument from Serbian to English. Finally, the original English version and the translated English version were compared. By comparing these two versions of the instruments, it was determined that there are no significant differences.

The survey was conducted in electronic format in the first quarter of 2022. The link that the respondents received contained the Academic Motivation Scale, the Self-Regulation Questionnaire and a questionnaire on the general data of the respondents: gender, age, highest completed educational level and the country they come from. Completing both instruments and the general questionnaire took 10 to 20 minutes. Before participating, the respondents were informed that the research is anonymous, and that the data will be used exclusively for research purposes.

The collected data was presented with the help of descriptive statistical measures (frequencies, percentages, arithmetic means, standard deviations, minimum and maximum values), while the Pearson correlation coefficient and structural modeling were used for data processing. Structural equation modeling was used to analyze the structural relationships between the examined constructs, which, unlike multiple regression, also uses latent variables, allows more dependent variables, and takes into account correlations between them and measurement error. Statistical data processing was carried out using statistical packages IBM SPSS Statistics, version

26.0 (descriptive statistics and correlation) and MPlus 7.31 (structural equation modeling).

■ RESULTS

Correlations of self-regulation factors covered by the Self-Regulation Questionnaire (SRQ) and motivation factors covered by the Academic Motivation Scale (AMS) are presented in Table 2.

If we observe the correlations at the level of individual instruments, Table 2 shows that the three factors of self-regulation are statistically significantly positively correlated with each other, as well as that the a-motivation factor being statistically significantly negatively correlated with all factors of intrinsic and extrinsic motivation, except for introjected extrinsic motivation, where statistical significance has not been established. Correlations range from weak to strong.

When it comes to the association pattern between the factors of the two applied instruments, it was determined that each of the self-regulation factors is associated with several forms of motivation (Table 2). Self-control is statistically significantly positively related to all three forms of intrinsic motivation (motivation for knowledge, achievement and stimulation) and identified extrinsic motivation, while it is negatively related to introjected extrinsic motivation, external regulation and a-motivation. Decision-making correlates statistically significantly with all three forms of intrinsic motivation (motivation for knowledge, achievement and stimulation) and all three forms of extrinsic motivation (identified motivation, introjected motivation and external regulation), and negatively correlates with amotivation. Goal orientation is statistically significantly positively correlated with three forms of intrinsic motivation (motivation for knowledge, motivation for achievement, motivation for stimulation), as well as with three forms of extrinsic motivation (identified motivation, introjected motivation and external regulation). The correlation between goal orientation and a-motivation is statistically negatively significant.

Table 2. Factor correlations of the Academic Motivation Scale and the Self-Regulation Questionnaire

Con-struct	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
SC	1	.283**	.288**	.174**	.161**	.117**	.107**	-.156**	-.083**	-.455**	
DM		1	.425**	.433**	.412**	.357**	.315**	.133**	.128**	-.173**	
GO			1	.276**	.264**	.239**	.246**	.119**	.139**	-.137**	
I-K				1	.742**	.798**	.517**	.264**	.154**	-.444**	
I-A					1	.729**	.519**	.504**	.277**	-.350**	
I-S						1	.434**	.303**	.160**	-.296**	
E-ID							1	.325**	.569**	-.406**	
E-IN								1	.511**	-.002	
E-ER									1	-.048*	
AM										1	
M	3.359	3.615	3.817	5.154	4.619	4.540	5.403	4.401	4.979	2.221	
SD	0.781		0.646	0.769	1.367	1.416	1.483	1.200	1.570	1.381	1.360

SC=self control; DM=decision making; GO=goal orientation; I-K= intrinsic motivation for knowledge; I-A= intrinsic motivation for achievement; I-S= intrinsic motivation to experience stimulation; E-ID= extrinsic motivation – identified; E-IN= extrinsic motivation – introjected; E-ER= extrinsic motivation – external regulation; AM= amotivation.

** Correlation is significant at the 0.01 level.

* Correlation is significant at the 0.05 level.

The existence of a predictive relationship between self-regulation factors and motivation factors was determined using structural modeling (Table 3). The specified model of inter-factor relationships has satisfactory fit indicators: SB $\chi^2=4287.619$, $df=1130$, $p<.001$, CFI=0.909, TLI=0.901, RMSEA=0.040 with a 90% confidence interval of 0.039-0.042, SRMR=0.047.

Self-control was determined to be a negative predictor of introjected extrinsic motivation, extrinsic motivation in the form of external regulation and a-motivation. Decision-making positively predicts all three forms of intrinsic motivation (for knowledge, achievement, stimulation) and all three forms of extrinsic motivation (identified and introjected motivation and external regulation). Goal orientation is a positive predictor of all forms of intrinsic motivation (knowledge, achievement, stimulation) and all forms of extrinsic motivation (identified and introjected motivation and external regulation) (Table 3).

Table 3. Predictive relationship of self-regulation factors in relation to motivation factors

	Coefficient		
	Indicator	Standard error	p
<i>Self-control</i>			
Intrinsic motivation for knowledge	-0.008	0.028	0.786
Intrinsic motivation for achievement	-0.009	0.029	0.771
Intrinsic motivation for stimulation	-0.053	0.029	0.063
Extrinsic motivation – identified	-0.045	0.032	0.161
Extrinsic motivation – introjected	-0.292	0.029	0.000
Extrinsic motivation – external regulation	-0.191	0.030	0.000
A-motivation	-0.523	0.031	0.000
<i>Decision-making</i>			
Intrinsic motivation for knowledge	0.479	0.036	0.000
Intrinsic motivation for achievement	0.458	0.037	0.000
Intrinsic motivation for stimulation	0.346	0.037	0.000
Extrinsic motivation – identified	0.354	0.042	0.000
Extrinsic motivation – introjected	0.194	0.041	0.000
Extrinsic motivation – external regulation	0.162	0.042	0.000
A-motivation	-0.37	0.037	0.319
<i>Goal orientation</i>			
Intrinsic motivation for knowledge	0.074	0.035	0.035
Intrinsic motivation for achievement	0.077	0.036	0.033
Intrinsic motivation for stimulation	0.119	0.036	0.001
Extrinsic motivation – identified	0.111	0.040	0.005
Extrinsic motivation – introjected	0.137	0.039	0.000
Extrinsic motivation – external regulation	0.139	0.039	0.000
A-motivation	0.049	0.033	0.137

■ DISCUSSION

The purpose of this research was to determine the relationship between the dimensions of self-regulation and academic motivation, as important determinants of readiness to learn in adults. The interrelationships of individual dimensions within the concepts of self-regulation and academic motivation were also determined. The obtained findings are consistent with the theories of self-regulated learning (Brown et al., 1999; Zimmerman, 2000) and self-determination (Ryan & Deci, 2000), and confirm that the assumptions of the authors of the SRQ and AMS instruments (Brown et al., 1999; Vallerand et al., 1993) that these instruments can be important tools for examining self-regulation and academic motivation, as important determinants of readiness to learn in adults.

When it comes to mutual relations in the domain of the examined factors of self-regulation, the results show that three factors of self-regulation – self-control, decision-making, and goal orientation are positively related to each other. This finding supports the model of self-regulated learning (Zimmerman, 2000; Zimmerman & Schunk, 2001) and is consistent with previous studies, which dealt with the relationship between these concepts (Cheng, 2011; Karoly et al., 2005; Vizek Vidović & Vlahović Štetić, 2007; Wentzel, 2007). Namely, the processes of self-control, including impulse control and self-orientation, and capacities for independent decision-making and goal orientation are often very intertwined in the process of self-regulation of learning, and hence their connection is expected, even though they are different aspects of self-regulation.

Significant positive relationships were also established between the dimensions of academic motivation, whereby the factor of a-motivation is negatively related to the factors of intrinsic and extrinsic motivation. The obtained correlations, which range from lower to higher, correspond to the assumptions of the theory of self-determination (Ryan & Deci, 2000, 2020), according to which there is a continuum of self-determination, where motivated behavior extends from a-motivation, i.e. complete absence of motivation, through different types of externally regulated motivation, all the way to different forms of internal motivation. Experimental studies that examined the postulates of cognitive evaluation theory showed that external incentives in the form of rewards or social pressures and expectations gradually weaken internal motivation and shift the focus to different dimensions of external motivation (Ryan & Deci, 2019; Vansteenkiste et al., 2010). In their studies, both the authors of the self-determination theory, and the Academic Motivation Scale (AMS), confirmed the mutual connection of different dimensions within the framework of internal and external motivation – the closer the dimensions on the continuum are to each other, the higher the correlations (Ryan & Deci, 2020; Vallerand et al., 1993), although, as shown in this research, they are still not too high, which indicates that they are close but different constructs.

As this research showed, all three examined factors of self-regulation — self-control, decision-making and goal orientation are related to different aspects of internal and external motivation, as well as a motivation, confirming all three hypotheses of this research. This finding was expected and is consistent with the postulates of self-regulation and self-determination theories, which deal with concepts related to academic motivation, readiness to learn and the learning process itself (Brown et al., 1999; Ryan & Deci, 2000) and the results of previous studies that dealt with various factors that determine motivation for learning and academic progress (Ablard & Lipschultz, 1998; Aronson et al., 2014; Boekaerts, 1997; Green et al., 2007, according to Sorić, 2014; Vizek Vidović & Vlahović Štetić, 2007; Zimmerman, 2015; Zimmerman & Kitsantas, 2005; Zimmerman & Schunk, 2011).

As a factor of self-regulation, which includes both impulse control and self-orientation, self-control was determined to be positively related to all three forms of intrinsic motivation – motivation for knowledge, achievement, and stimulation, as well as identified extrinsic motivation, while simultaneously being negatively related to introjected extrinsic motivation, external regulation and a-motivation, for which the structural model that was derived in this research also showed a negative predictive value of the self-control dimension. This finding supports the theoretical models of self-regulation and self-determination (Brown et al., 1999; Ryan & Deci, 2000; Zimmerman, 2011; Zimmerman & Schunk, 2008), confirming the relevance of the continuum of determination, where at one pole there is a complete absence of control and autonomy, typical for a-motivation, followed by different forms of external motivation, where a certain degree of control exists but is predominantly placed in external frameworks and regulated by external factors with a significant absence of autonomy and self-determination, all the way to the dimensions of internal motivation, with the highest degree of autonomy and self-control, whereby the very basis of autonomous and self-regulating behavior are the factors of internal and internalized external motivation (Ryan & Deci, 2020). Therefore, individuals who have developed self-control, including good impulse control and self-orientation, will be more inclined to strive for valuing and acquiring knowledge, for the sake of knowledge itself and enjoying the learning process and experiencing stimulation, striving to maximize their own opportunities and potentials. They will be significantly less driven by external rewards, social pressure with minimal academic motivation (Aronson et al., 2014; Csíkszentmihályi, 2020; Lončarić, 2014; Zimmerman & Kitsantas, 2005).

When it comes to the other two components of self-regulation, decision-making and goal orientation are connected and successfully predict all three forms of intrinsic motivation – motivation for knowledge, achievement and stimulation, as well as all three forms of extrinsic motivation – identified motivation, introjected motivation, and external regulation, where they are negatively related to a-motivation, which corresponds to the initial research hypotheses. The authors emphasize that the

possibility of independent choice and the experience of competence significantly encourage internal motivation, which are already important determinants in the decision-making process itself (Ablard & Lipschultz, 1998; Ryan & Deci, 2019; Vallerand et al., 1993; Zimmerman, 2000; Zimmerman & Schunk, 2008). The relationship between the dimensions included in the instrument and different but related constructs tied to the factors and effects of motivational action was determined by examining the construct-validity of the Academic Motivation Scale (AMS). Here, personal goals in the educational context and task orientation, concentration in the teaching process, intentions and behavioral outcomes are particularly distinguished (Vallerand et al., 1993; Zimmerman, 2015; Zimmerman & Schunk, 2001). Therefore, it can be expected that individuals with better decisions-making skills and stronger goal orientation will have more developed components, internal and external motivations and will be guided by the need to acquire knowledge and the experiencing stimulation as well as the realization of individual potentials, external awards and social recognitions, with minimal a-motivation. This capacity for decision-making and a clear orientation towards the goal lead them to make appropriate choices and effective strategies in action, which further enhances their academic motivation, whether they are motivated primarily by motives of an internal or external character.

■ CONCLUSION

In conclusion, the results of this research, which aimed to examine the relationship between the dimensions of self-regulation and academic motivation as important determinants of readiness for learning in adults, theoretically confirmed the assumptions of theories of self-regulated learning (Vohs & Baumeister, 2004; Wentzel, 2007; Zimmerman, 2000) and self-determination (Ryan & Deci, 2000), and indicate the coherence of the relevant concepts covered by these theories. In a practical sense, the findings confirm the possibility of applying appropriate instruments for measuring self-regulation – SRQ (Brown et al., 1999; Gavora et al., 2015) and academic motivation – AMS (Vallerand et al., 1993), in the domain of readiness to learn in adults. What makes this research valuable and different from other studies that dealt with similar research questions is its specific cross-cultural, whose respondents come from, to a certain extent, different education systems in the four countries covered, which enables a wider range of generalization of the obtained results.

Also, in the context of encouraging academic motivation in adults, this research provides guidelines that should be followed primarily with regard to the development of internal motivation which is of exceptional importance for achieving appropriate academic results. Appropriate programs and activities should

be directed towards those self-regulating factors, which in this research proved to be particularly important for the development of internal motivation. These are primarily self-control, including the ability to control impulses and self-orientation, then the ability to make decisions and adequately orient towards the goal. It would be expedient to connect the investigated concepts with other internal and external factors through future research. These factors such as personality traits, locus of control and the specifics of the social context may be important in self-regulation of learning, encouraging academic motivation, and in general, readiness to learn in adults.

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