



## **Predicting Engagement with School: A Study on Romanian Adolescents**

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### **Abstract**

*Engagement with school is a variable that has generated growing interest from researchers, practitioners, and decision-makers in education in recent decades. A consistent body of studies conducted in different segments of the middle and high school age population in Australia, Canada, East Asia, Europe, the USA, and other countries support the protective role that engagement with school plays against the depreciation of school achievements and the risk of early school dropout. Engagement with school also mediates the effects that the educational and social climate in the school has on the students' performance as well as on their adaptive behaviors. Therefore, investigating the factors that account for individual differences in school engagement among adolescents is an important task of research in the field of educational sciences. This study aimed to investigate the psychosocial determinants of engagement with school among Romanian adolescents. Data were collected from 534 participants attending different high schools. Adolescents completed a set of standardized tools that included seven questionnaires, scales, and inventories. To obtain the predictive models, linear multiple regression analysis was used. Twelve independent variables were introduced in the regression models where the criteria were the facets of school engagement. The most consistent predictors of the facets of engagement with school were motivation/self-regulation, general attitude toward school, intrinsic academic motivation, and social support from peers. These data can be added to the empirical evidence on the variables that contribute to the facilitation of a positive attitude toward school as well as to efforts oriented toward solid work among adolescents.*

**Key words:** Adolescents; attitudes toward school; engagement with school; intrinsic academic motivation; predictors; social support

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## **1. Introduction**

Through the learning tasks and the opportunities they offer for the acquisition of general theoretical and practical knowledge, as well as life skills and personal autonomy, schooling is a key stage in the development of the human individual (Roeser, Eccles, & Sameroff, 2000; Sandovici & Robu, 2014). During schooling, adolescents are endowed with the resources they need for optimal adaptation to the social, economic, and cultural changes that mark contemporary society. Adolescence is conceptualized as a critical period of transition from childhood to adulthood (Papalia, Wendkos Olds, & Duskin Feldman, 2009). The changes characteristic of this stage of early human development are both opportunities and challenges for adolescents, their families, health professionals, educators, and communities. The expansion of cognitive abilities, the restructuring of emotional life and interpersonal relationships, the focus of adolescents on their own identity, the transitions from elementary school to middle school, high school, and college, as well as entering the labor market predispose adolescents to numerous challenges in academic functioning (Caranfil 2017; Wigfield, Eccles, & Pintrich, 1996). Sometimes these difficulties have a lasting impact that can span a lifetime. Research that has addressed fluctuations in academic motivation shows that this variable tends to decline after the transition from primary to secondary education. The most consistent decline in academic motivation tends to occur in early adolescence, i.e., until the age of 15-16 (Gillet, Vallerand, & Lafrenière, 2012; Gottfried, Fleming, & Gottfried, 2001).

Both in European Union member countries (Ikeda & Garcia, 2014; Umbreş, Sandu, & Stoica, 2014) and in those outside the European Union (Aud *et al.*, 2011; Lucio, Hunt, & Bornovalova, 2012), undesirable phenomena related to the efficiency of educational systems have proliferated. These include decreased academic motivation among students, negative attitudes toward teachers, classes, school success or the rules of an educational institution, academic underachievement, deterioration in performance on basic school acquisition tests, partial/total failure, maladjustment to school tasks, functional illiteracy, early school dropout, etc. In Romania, the results of surveys and studies carried out in the last two decades highlight that, in the view of many teenagers, school no longer represents the path to individual development and success in life (IŞE, 2015; Popenici & Fartuşnic, 2009).

According to the educational productivity theory (Walberg, 1981), attitudes related to school and academic motivation are conditioned both by certain psychosocial characteristics by which students differentiate themselves and by the quality of the immediate environments (family, school, social network, community, etc.) that mark the development of children and teenagers. Variables include students' skills, abilities and motivational structures, family climate, social and emotional environment in the school, quality of the classroom instruction, characteristics of the social network, community support services, etc. The interaction between these variables can explain both the individual differences in the adjustment of adolescents to the requirements of the educational path, as well as the problems encountered by the educational systems in different countries. Engagement with school can be included among the individual characteristics that have an important impact on an adolescent's educational path.

## **2. Engagement with school: conceptual facets**

Engagement with school has been conceptualized as comprising various facets. For example, R. Audas and J. D. Willms (2001) defined engagement with school as the extent to which students participate in school and extracurricular activities, identify with the goals of schooling, and value them. Other authors have conceptualized school engagement as students' involvement in the learning process that is accompanied by a positive emotional tone (Skinner & Belmont, 1993), the level at which students are motivated to learn and achieve good academic performance (Libbey, 2004), active participation in instructional activities, the sense of belonging to the school

community and the valuing of academic performance (Finn & Rock, 1997) or the attention, interest and effort that students devote to learning activities in the classroom (Marks, 2000).

Engagement with school has also been conceptualized as a multidimensional meta-construct encompassing two (i.e., affective/emotional and behavioral – Finn, 1989; Skinner *et al.*, 2009), three (i.e., cognitive, affective and behavioral – Fredricks, Blumenfeld, & Paris, 2004; Lam, Wong, Yang, & Liu, 2012) or four components (i.e., cognitive, affective, behavioral and agentic – Reeve & Tseng, 2011; Veiga, 2016; Veiga & Robu, 2014). The cognitive component refers to the investments a student makes in classroom learning activities, self-regulatory processes, as well as the strategies he uses in individual study. Other facets of the cognitive component are (Fredricks, Blumenfeld, & Paris, 2004): a student's desire to exceed the minimum and mandatory requirements imposed by a teacher, cognitive flexibility in solving problems (e.g., in mathematics), efforts constantly directed toward understanding the curricular contents or improve academic skills, the need for cognitive stimulation, the use of meta-cognitive strategies in the learning process, positive adaptation to failure, etc. The affective component includes the emotional responses of the student to instructional activities in the classroom, individual study hours, teachers he/she has, classmates, or the school he/she attends (Finn & Rock, 1997; Skinner & Belmont, 1993). Emotional responses include the student's enjoyment of engaging in various school or extracurricular activities, boredom during classes, anxiety, feeling attached to teachers, classmates, and school, etc. A student's involvement, motivation, and adaptive strategies can be related to the positive emotions he experiences in the instructional process carried out in the classroom and in the school environment where he/she learns (Reschly, Huebner, Appleton, & Antaramian, 2008). According to E. A. Skinner and M. J. Belmont (1993), the behavioral component includes facets, such as regular school attendance, the attention a student pays during lessons, compliance with the rules and norms of behavior promoted in the school, disciplined and polite behavior, active involvement in the instructional activities, extracurricular activities attendance (e.g., sports competitions), etc. The agentic component refers to the process by which a student strives to personalize and enrich both the contents they learn and the conditions in which the teaching-learning process takes place in the classroom (Reeve & Tseng, 2011; Veiga, 2016). For example, a student can provide teachers with anchors for various discussions about the learning content, ask questions and express their learning needs, ask for clarification on the contents taught, or communicate their lesson likes/dislikes to teachers.

Some researchers suggest conceptualizing school engagement in terms of a psychological state that can be modified through educational interventions (Lam, Wong, Yang, & Liu, 2012). In this perspective, it is important to delimit the indicators of a student's engagement (i.e., cognitive, affective, and behavioral) both from the contextual and individual factors that facilitate engagement, as well as from its impact on the student's adjustment to school tasks, as well as in other areas of psychosocial functioning.

Researchers have consistently focused their attention on the study of factors that contribute to the prediction of engagement with school among students of different ages. The explanatory variables were divided into three major areas (Fredricks, Blumenfeld, & Paris, 2004; Robu & Sandovici, 2014b; Lam, Wong, Yang, & Liu, 2012): student individual characteristics, the social context in which the student lives and develops, respectively the quality of classroom instruction and school climate. Several studies have identified factors that contribute to explaining child/adolescent differences in engagement with school. Among the reported factors there are: gender (Darom & Rich, 1988; Lam *et al.*, 2012; Robu, 2012; Robu, Robu, & Caranfil, 2014), perceived academic self-efficacy (Caraway *et al.*, 2003; Connell *et al.*, 1995; Robu & Sandovici, 2014a), conscientiousness as a stable personality predisposition (Duckworth & Seligman, 2005; Robu, 2012; Robu & Sandovici, 2014a), intrinsic motivation (Caranfil & Robu, 2016; Saeed & Zyngier, 2012; Wang & Eccles, 2013), orientation to personal growth (Robu, 2012; Robu & Sandovici, 2014a), the level of aspirations a student has regarding academic achievement (Sandovici, 2017), the quality of the relationship between the student and parents (Robu, 2012),

social support from parents (Chen, 2008; Fan & Williams, 2010; Lam *et al.*, 2012; Robu, 2013), the expectations parents have regarding the student's educational path (Fan & Williams, 2010), social support from teachers (Lam *et al.*, 2012; Patrick, Ryan, & Kaplan, 2007; Robu, 2012, 2013; Robu & Sandovici, 2014a; Ryan & Patrick, 2001) and peers (e.g., classmates; Caranfil & Robu, 2016; Juvonen, Espinoza, & Knifsend, 2012; Patrick, Ryan, & Kaplan, 2007; Robu, 2012, 2013), the autonomy of which the student benefits in the learning process (Caranfil & Robu, 2016; Connell *et al.*, 1995; Lam, Pak, & Ma, 2007; Lam, Wong, Yang, & Liu, 2012; Robu & Sandovici, 2014a), the clarity and consistency of the rules promoted in the school (Lam, Wong, Yang, & Liu, 2012; Robu & Sandovici, 2014a), the quality of instructional practices (Caranfil & Robu, 2016; Robu, Robu, & Caranfil, 2014; Robu & Sandovici, 2014a), the quality of the assessment of academic acquisitions (Lam, Pak, & Ma, 2007; Lam, Wong, Yang, & Liu, 2012), etc. Students' school engagement is predictive of homework completion, higher academic performance, better scores on standardized acquisition tests, school retention, well-adjusted classroom behaviors, positive emotions related to school (e.g., academic self-esteem and satisfaction with school), and post-secondary school enrollment (Archambault *et al.*, 2009; Caraway *et al.*, 2003; Finn and Zimmer, 2012; Furrer & Skinner, 2003; Hirschfield & Gasper, 2011; Lam *et al.*, 2012; Li & Lerner, 2011; Manlove, 1998; Pierson & Connell, 1992; Robu, 2013; Robu, Robu, & Caranfil, 2014; Wang & Holcombe, 2010).

### **3. The current study**

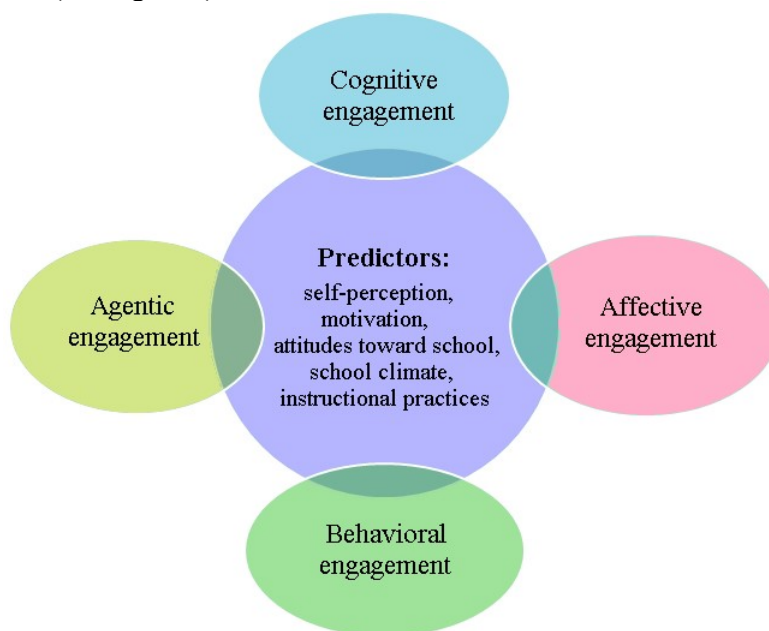
The concept of engagement with school has begun to attract increasing interest from educational researchers and practitioners. A consistent body of research across middle-aged and older school-age populations in Australia, Canada, East Asia, Europe, the USA, and other countries supports the protective role that school engagement and achievement motivation have on the impairment of academic performance and the risk for premature abandonment of the educational path (Archambault *et al.*, 2009; Furrer & Skinner, 2003; Sinclair *et al.*, 2003). Therefore, deepening the study of this dimension of schooling is necessary for several economic and social reasons.

#### **3.1. Aim**

Students who are constantly engaged in school activities report better performance, show positive attitudes and behaviors adapted to the school environment, and have a positive self-image. Moreover, students who are engaged in school report higher levels of self-esteem and satisfaction with school and tend to have high aspirations regarding their careers. Likewise, school engagement can mediate the relationships between students' characteristics, the instructional and social climate in the classroom/school or social support, academic performance, and their adaptive behaviors (Robu, 2013; Robu, Robu, & Caranfil, 2014; Robu & Sandovici, 2014a; Sandovici, 2017; Wang & Holcombe, 2010). Therefore, we believe that determining the positive predictors of engagement with school and stimulating this motivational and attitudinal dimension can contribute both to reducing adolescent schooling vulnerabilities and increasing the productivity of the educational process. Using a cross-sectional design, we investigated the psychosocial determinants of engagement with school among Romanian adolescents.

### **3.2. The hypothetical model**

The tested hypothetical model included several sets of potential predictors of the facets of school engagement (see Figure 1).



**Figure 1.** A generic predictive model of engagement with school

The model was translated into the following working hypotheses:

- A. A student's positive perception of his/her academic skills is a positive predictor of the facets of engagement with school.
- B. A student's high expectation of his/her academic performance is a positive predictor of facets of school engagement.
- C. Motivation for future achievement is a positive predictor of the facets of engagement with school.
- D. Both extrinsic and intrinsic motivation are positive predictors of the facets of engagement with school.
- E. Amotivation is a negative predictor of the facets of school engagement.
- F. The positive attitudes that a student exhibits toward the school in which he/she studies, teachers and classes, learning, and the school activity in general are positive predictors of the facets of school engagement.
- G. A student's positive perception of school climate is a positive predictor of the facets of school engagement.
- H. A student's positive perception of the quality of classroom instructional practices is a positive predictor of the facets of engagement with school.

### **3.3. Participants and procedure**

The raw data comes from processing the valid answers that 534 Romanian high school students gave to a set of questionnaires. There were 281 girls and 253 boys. Participants ranged in age from 14 to 19 years ( $M = 16.27$ ;  $SD = 1.00$ ). The sample included high school students following the theoretical ( $n = 180$ ), technological and technical ( $n = 149$ ), economic ( $n = 199$ ), and vocational ( $n = 86$ ) specialization profiles. There were 144 students in the 9th grade, 231 students in the 10th grade, 109 students in the 11th grade, and 50 students in the 12th grade.

Participants lived in intact families ( $n = 385$ ), families temporarily disorganized by parental departure abroad ( $n = 68$ ), or families disorganized as a consequence of the death of one of the parents or divorce ( $n = 81$ ).

Participants were recruited through convenience sampling. The recruitment pool was the school population from five high school education institutions in the northeast of Romania. Data collection from the school population was conducted between October 2018 and May 2019. Participants completed the questionnaires during the regular school schedule. Initially, more than 600 standardized questionnaire protocols were distributed. Following the analysis of omissions in responses or atypical patterns, only 534 protocols were retained in the final database.

### **3.4. Measures**

Participants completed several standardized instruments that operationalized the main variables of interest for the study. Thus, the students were asked to indicate the extent (from 5 to 10) to which they were satisfied when they were being heard or when they gave a control paper or a test in one of the subjects they studied at school. Responses to this item were numerically coded to obtain the variable regarding the expectation a student had regarding his/her academic performance.

A student's family status was derived from the combined analysis of responses to four items. Thus: a) students who reported that they lived at home with both parents (regardless of whether or not they had brothers and/or sisters and whether they also lived with other people) were included in the group of those who came from intact families; b) students who lived with only one of their parents (because the other was working abroad), as well as those who lived with other people – brothers and/or sisters or grandparents (because both parents were abroad) were included in the group of those with temporarily disorganized families; c) students who lived only with one of their parents (because the other was deceased or had left home due to divorce), those who lived with other people (because one of their parents was abroad and the other deceased or had left home as a result of divorce), as well as students who lived in placement centers were included in the group of those who came from disorganized families.

The facets of engagement with school were measured with the Romanian version (Veiga & Robu, 2014) of the *Student Engagement in School/Four-Dimension Scale* (SES/4-DS; Veiga, 2016, 2013). SES/4-DS includes 20 items that measure cognitive engagement (e.g., “When writing my work, I begin by making a plan for drafting the text”), affective (e.g., “My school is a place where I feel alone”), behavioral (e.g., “I am absent from school without a valid reason”) and agentic (e.g., “During lessons, I intervene to express my opinions”). The answer to each item can be given on a six-point Likert scale ranging from 1 – *total disagreement* to 6 – *total agreement*. For each of the facets of school engagement, the score can be obtained by calculating the mean scores for the corresponding items (possible range: 1-6). The mean score for all items in the SES/4-DS was the indicator of the overall level of engagement with school.

F. H. Veiga and V. Robu (2014) performed a cross-cultural psychometric study in which they revealed reasonable or good levels of factor structure congruence for the Romanian and Portuguese versions of the SES/4-DS. For the Romanian version, the internal consistency of the scales in the SES/4-DS was satisfactory ( $\alpha = 0.73-0.78$ ; Veiga & Robu, 2014). V. Robu and A. Sandovici (2017) tested the internal validity of the Romanian version of the SES/4-DS using confirmatory factor analysis ( $n = 646$  adolescents). Statistical fit indicators revealed the superiority of the measurement model with four intercorrelated latent factors and four pairs of correlated errors ( $\chi^2 = 356.15$ ,  $df = 162$ ,  $p < 0.001$ ,  $\chi^2/df = 2.19$ ,  $RMR = 0.080$ ,  $GFI = 0.947$ ,  $NNFI = 0.902$ ,  $CFI = 0.916$ ,  $RMSEA = 0.043$ ,  $CI_{90\%} = 0.037 - 0.049$ ). In the current study, the internal consistencies were: cognitive engagement – 0.66; affective engagement – 0.78; behavioral engagement – 0.72; agentic engagement – 0.72.

To measure academic motivation, the Romanian language version (Robu, Rusnac, & Caranfil, 2019) of the well-known *Academic Motivation Scale-High School* instrument (AMS-HS;

Vallerand *et al.*, 1989, 1992, 1993) was used. The conceptual framework of the instrument leverages the self-determination macrotheory (SDT; Deci & Ryan, 2000). According to this theoretical model, the motivation of human individuals can be described by a continuum of levels of personal autonomy, differentiating amotivation, extrinsic motivation, and intrinsic motivation. The AMS-HS was constructed to operationalize dimensions of school motivation among high school students. It includes 28 items distributed on three subscales, respectively seven components, as follows: a) amotivation –  $k = 4$  items (e.g., “I don’t know. I can’t understand what I am doing in school”); b) preparation for the professional career –  $k = 4$  items (e.g., “Because eventually it will enable me to enter the job market in a field that I like”); c) self-esteem management –  $k = 4$  items (e.g., “To show myself that I am an intelligent person”); d) the need to obtain a degree for a comfortable life –  $k = 4$  items (e.g., “Because I need at least a high-school degree in order to find a high-paying job later on”); e) the need for knowledge –  $k = 4$  items (e.g., “For the pleasure that I experience in broadening my knowledge about subjects which appeal to me”); f) the desire for personal achievement –  $k = 4$  items (e.g., “For the satisfaction I feel when I am in the process of accomplishing difficult academic activities”); g) the desire for stimulation –  $k = 4$  items (e.g., “For the «high» feeling that I experience while reading about various interesting subjects”). To each of the items, the participants answered on a seven-point Likert scale ranging from 1 – *does not correspond at all* to 7 – *corresponds exactly*. To control multicollinearity (regression models) and operate with an optimal number of independent variables in the statistical processing, we only calculated the scores for the subscales related to amotivation (possible range of variation: 4-28), extrinsic motivation (possible range of variation: 12-84) and intrinsic motivation (possible range: 12-84). High scores indicated high levels of amotivation, extrinsic motivation, and intrinsic motivation.

The Romanian version of the AMS-HS instrument was psychometrically tested by administering it to a sample of 1849 high school students (Robu, Rusnac, & Caranfil, 2019). The final model included two second-order latent factors (i.e., extrinsic and intrinsic motivation), seven first-order latent factors (i.e., amotivation, extrinsic motivation – career preparation, self-esteem management, the need to obtain a degree of studies for a comfortable life, respectively intrinsic motivation – the need for knowledge, the desire for personal achievement, the desire for stimulation) and seven pairs of errors correlated with each other ( $\chi^2 = 2385.57$ ,  $df = 334$ ,  $p < 0.001$ ,  $\chi^2/df = 7.14$ ,  $RMR = 0.149$ ,  $GFI = 0.911$ ,  $NNFI = 0.902$ ,  $CFI = 0.913$ ,  $RMSEA = 0.058$ ,  $CI90\% = 0.055 - 0.060$ ). In the current study, the internal consistencies were: amotivation – 0.83; career preparation – 0.80; self-esteem management – 0.78; the need to obtain a degree – 0.76; extrinsic motivation – 0.88; need for knowledge – 0.80; the desire for personal achievement – 0.77; desire for stimulation – 0.72; intrinsic motivation – 0.89.

Attitude toward school can be operationally defined by three components (Cheng & Chan, 2003): cognitive (e.g., “I think school can help me become a mature person”), affective (e.g., “Life school is boring and uninteresting”) and behavioral (e.g., “I try to learn a lot of things”). In the present study, school attitude was operationalized with the Romanian version (Caranfil, 2020) of the *School Attitude Assessment Survey-Revised* (SAAS-R; McCoach & Siegle, 2003). The instrument includes 35 items distributed on five scales, as follows: academic self-perception (7 items), general attitude toward school (5 items), attitude toward teachers and classes (7 items), goal valuation (6 items), respectively motivation/self-regulation (10 items). The first dimension refers to the image that a student has of his abilities in the school domain. It also includes the general beliefs and level of self-worth associated with competencies in this area of functioning. Academic self-perception involves internal and external comparisons. Students compare their performance with that of their classmates, but also with the results they achieve in other areas. The attitude toward teachers and classes can be conceptualized by the fact that the personality of the teachers, the way they organize themselves and the quality of the classes they teach can influence students’ behaviors and the level of acquisition they achieve (McCoach & Siegle, 2003). The general attitude toward school consists of the interest and feelings that students show

toward the school institution where they study. Students who are successful in school tend to be more interested in learning and more attached to the school they attend. The goals they set for themselves in the school field and the values they attach to school achievement influence behaviors oriented toward the self-regulation of the learning process and motivation (McCoach & Siegle, 2003). Intrinsic motivation and self-regulation are two of the dimensions by which the process of self-regulated learning can be characterized. Self-regulation refers to students' thoughts, feelings, actions, and behaviors that are systematically oriented toward achieving specific learning goals (Schunk & Zimmerman, 1994). Research suggests that self-regulated learning includes components such as metacognitive strategies, management of one's resources, actions and behaviors, effort control, respectively the use of specific cognitive strategies in the learning process (Pintrich & De Groot, 1990). Self-regulation is a consistent predictor of academic success, but students must be intrinsically motivated to use cognitive and metacognitive strategies and regulate their effort in learning. For this reason, intrinsic motivation and self-regulation must be considered together when conceptualizing students' attitudes toward school.

In the present study, high school students responded to each item of the SAAS-R instrument using a seven-point Likert scale gradually distributed from 1 – *strongly disagree* to 7 – *strongly agree*. Self-perception in the school domain was measured by items such as “I am good at learning new things in school”. The students' attitude toward the school they attend was operationalized through items such as “This school is a good match for me”. Attitude toward teachers and classes was measured by items such as “My teachers make learning interesting”. Valorization of goals related to school activity was measured by items such as “I want to do my best in school”. Motivation/self-regulation were operationalized through items such as “I check my assignments before I turn them in”. For each dimension, the total score was obtained by calculating the average scores for the corresponding items (possible range: 1-7).

The SAAS-R instrument demonstrates good psychometric properties (McCoach & Siegle, 2003; Suldo, Shaffer, & Shaunessy, 2008). Construct validity, convergent validity, predictive validity and internal consistency of the Romanian version for the scales of the SAAS-R were tested using a sample composed of 823 high school students (Caranfil, 2020). The final metric model (five intercorrelated first-order factors, respectively six constraints on the correlation of measurement errors) revealed a satisfactory statistical fit ( $\chi^2 = 1825.86$ ,  $df = 544$ ,  $p < 0.001$ ,  $\chi^2/df = 3.35$ ,  $RMR = 0.099$ ,  $GFI = 0.883$ ,  $NNFI = 0.918$ ,  $CFI = 0.925$ ,  $RMSEA = 0.054$ ,  $CI90\% = 0.051 - 0.056$ ). For the current sample, the scales of the SAAS-R revealed good internal consistency values, as follows: academic self-perception – 0.79; general attitude toward school – 0.90; attitude toward teachers and classes – 0.89; goal valuation – 0.86; motivation/self-regulation – 0.89.

In a general sense, school climate can be defined by the shared beliefs, values, and attitudes that shape the interactions between students and staff of a school, respectively by the behavioral parameters and acceptable norms that are promoted in a school (Wang & Degol, 2016). N. Way, R. Reddy, and J. Rhodes (2007) conceptualize the school climate through an interpersonal dimension (social support from teachers and peers), one related to the learning process (students' autonomy and participation in the adoption of decisions concerning their school activity) and an organizational dimension (clarity and consistency of rules and norms). In the present study, school climate was measured with four subscales ( $k = 23$  items) from the Romanian version of the *Perceived School Climate Scale* (PSCS; Brand *et al.*, 2003; see also Way, Reddy, & Rhodes, 2007). Social support from teachers was operationalized through six items (e.g. “If students want to talk about something, teachers will find time to do it”). Social support from peers (classmates/friends) was operationalized through six items (e.g. “Students in this school have trouble getting along with each other”). The autonomy granted to students in the learning process and the instructional activities was measured with five other items (e.g., “Teachers ask students what they want to learn about”). The clarity, consistency, and strictness of the rules promoted in the school were measured with six items (e.g., “Teachers make a point to sticking to the rules in



classes”). Students rated on a five-point scale (1 – *never* to 5 – *always*) how true statements were for their school. For each dimension, the score was obtained by calculating the average of the scores for the corresponding items (possible range: 1-5). High scores were indicators of social support from teachers and peers, autonomy, respectively the clarity, consistency, and strictness of the rules promoted in the school.

Data from confirmatory factor analyses ( $n = 534$  Romanian high school students) indicated the superiority of the model with four intercorrelated latent factors and six pairs of intercorrelated errors. This model proved the most satisfactory statistical fit:  $\chi^2 = 432.13$ ,  $df = 218$ ,  $p < 0.001$ ,  $\chi^2/df = 1.98$ , SRMR = 0.047, AGFI = 0.905, NFI = 0.852, CFI = 0.919, RMSEA = 0.042, CI90 % RMSEA = 0.036 – 0.047. For the scales corresponding to the four latent factors, the internal consistencies were: social support from teachers – 0.77; social support from peers – 0.74; autonomy – 0.76; clarity, consistency, and strictness of school rules – 0.71.

The perception that adolescents had regarding the quality of instructional practices was operationalized using a shortened form ( $k = 12$  items) for the Romanian version (Robu, Caranfil, & Buganu, 2022) of the *Motivating Instructional Contexts Inventory* (MICI; Lam, Pak, & Ma, 2007). In its original version ( $k = 24$  items), the MICI instrument was constructed to capture Hong Kong Chinese students’ opinions of the extent to which teachers use motivating and engaging instructional strategies in classroom activities. In the present study, we proceeded to reduce the number of items because some of them (e.g., “The teachers provide us with several variants of work tasks, from which we can choose”) seemed less applicable to the Romanian educational system. The items operationalized six dimensions, as follows: a) adaptation of instructional methods, classroom tasks and homework according to students’ cognitive potential and educational needs (e.g., “Teachers give us tasks that have the right level of difficulty”); b) highlighting the usefulness of the learned content (e.g., “Teachers try to make us understand the usefulness of the things we learn at school in real life”); c) stimulating students’ curiosities (e.g., “Teachers encourage us to ask questions about what we learn during the lessons”); d) autonomy (e.g., “When they give us homework, teachers take our suggestions into account”); e) recognition of students’ merits and performances (e.g., “Teachers appreciate not only the students who obtained the highest grades in a study discipline, but also those who made progress”); f) the fair and formative character of the evaluation of the purchases (e.g., “When they correct our homework for class and the tests we give in class, the teachers show us what to improve”). To each of the items, students responded using a five-point Likert scale graded from 1 – *none of my teachers* to 5 – *all of my teachers*. For each respondent, the total score was obtained by calculating the average of the scores for all items (possible range: 1-5). High scores indicated students’ positive perception of the quality of instructional practices.

The data of the confirmatory factor analysis that was performed on the sample used in the present study indicated the superiority of the model with a single latent factor and four pairs of correlated errors ( $\chi^2 = 143.09$ ,  $df = 50$ ,  $p < 0.001$ ,  $\chi^2/df = 3.71$ , RMR = 0.053, GFI = 0.958, NNFI = 0.928, CFI = 0.946, RMSEA = 0.059, CI<sub>90%</sub> = 0.048 – 0.071). The scale corresponding to the latent factor revealed a good value of internal consistency ( $\alpha = 0.84$ ).

The Romanian version of the *Achievement Motivation – Denver Youth Survey* (AM-DYS; Institute of Behavioral Science, 1990; see also Dahlberg, Toal, Swahn, & Behrens, 2005) was used to assess achievement motivation. The instrument includes 13 items (e.g., “How important is it to own your own home?” or “How important is it to get a job to help out your family?”). These items measure motivation to achieve future outcomes associated with family, job, financial resources, and community. Students who participated in the current study were asked to indicate on a scale with five verbal anchors (1 – *not at all important...5 – very important*) the extent to which each statement reflects their current expectations. Point values were summed for each respondent and divided by the number of items. The intended range of scores is 1-5, with a higher score indicating greater motivation to achieve in conventional areas. The instrument was initially

administered to a sample of African-American boys between the ages of 12 and 16 (internal consistency = 0.78).

In our study, data from confirmatory factor analyses ( $n = 534$  high school students) indicated the superiority of the measurement model with a single latent factor and six pairs of correlated errors. For this model, the statistical fit was satisfactory:  $\chi^2 = 350.02$ ,  $df = 59$ ,  $p < 0.001$ ,  $\chi^2/df = 5.93$ , RMR = 0.062, GFI = 0.909, NNFI = 0.890, CFI = 0.893, RMSEA = 0.076, CI<sub>90%</sub> = 0.067 – 0.086. For the scale corresponding to the latent factor, the internal consistency value was equal to 0.83.

### **3.5. Data analysis**

Data were analyzed using SPSS for Windows 20.0 (IBM SPSS, Chicago, IL). For all quantitative variables, the normality of the distributions was checked. This is an important condition for the use of multivariate statistical techniques (Labăr, 2008). For a univariate normal distribution, the values of the indicators of symmetry (*skewness*) and peakedness (*kurtosis*) must be equal to zero (if the distribution is analyzed with statistical programs that consider the zero value as a benchmark for interpreting normality). There is no clear benchmark that indicates which values of the *skewness* and *kurtosis* indicators are acceptable, to conclude that a univariate distribution is normal. Some authors consider that the values of the *skewness* and *kurtosis* indicators should not be lower than  $-1.00$ , respectively higher than  $1.00$  (Labăr, 2008). Others consider and argue the usefulness of  $\pm 0.80$  limits (Sava, 2011).

The comparisons of the means for the facets of school engagement according to the gender of the adolescents, school level, and family status were performed using the *t*-Student test for two independent samples, respectively *One-Way* ANOVA (Labăr, 2008). For both tests, 0.05 was considered the reference value for statistical significance. For differences between means that were statistically significant, effect size ( $d_{\text{Cohen}}$ ) was calculated. J. Cohen (1992) suggested the following benchmarks for the qualitative interpretation of the coefficient *d*: 0.20 – small effect size; 0.50 – moderate effect size; 0.80 – high effect size.

To test the working hypotheses, the linear correlations were calculated and analyzed between the quantitative independent variables, on the one hand, and, on the other, the dimensions of engagement in school activity. These were estimated by calculating the values of the  $r_{\text{Pearson}}$  coefficient. The reference statistical threshold was set at 0.05. To obtain prediction models, multiple linear regression analysis was used. The regression analyses were performed with the *enter* method (Labăr, 2008). To streamline the regression models in terms of the number of possible predictors and the global explanatory power (the proportion of the variance of the dependent variables explained by the sets of independent variables), only the quantitative variables revealed absolute correlations  $\geq 0.30$  with the facets of engagement with school were retained. The individual contributions that an independent variable that was a predictor had in explaining the variance of the facets of school engagement were estimated by calculating the square of the semipartial correlation ( $r^2_{\text{sp}}$ ) between that variable and the criterion, respectively transforming the results obtained into percentages.

A prerequisite that was taken into account was multicollinearity between independent variables. This requirement should be controlled to reduce the risk of distorting the results of a regression model (e.g., the overall explanatory power or the predictive power of each independent variable). For example, a consistent correlation ( $r = 0.72$ ;  $p < 0.001$ ) was identified between the valorization of academic goals (as a facet of attitude toward school) and motivation/self-regulation. Therefore, the two independent variables were entered into two separate regression models to avoid multicollinearity.

## 4. Results

### 4.1. Univariate descriptive data

Variable distributions of interest were analyzed by reference to the possible ranges of variation of scores on the instruments administered to the adolescents, as well as to mean values. The following were found: a) the surveyed adolescents showed a tendency to obtain a moderate to low score for the amotivation ( $M = 10.01$ ;  $SD = 5.80$ ); b) moderate scores were obtained for cognitive engagement with school ( $M = 3.74$ ;  $SD = 0.87$ ), agentic engagement ( $M = 3.21$ ;  $SD = 1.00$ ), total engagement ( $M = 4.09$ ;  $SD = 0.59$ ), support from teachers ( $M = 3.09$ ;  $SD = 0.73$ ), the autonomy granted to students ( $M = 2.63$ ;  $SD = 0.70$ ), the quality of instructional practices ( $M = 3.08$ ;  $SD = 0.68$ ), the general attitude toward school ( $M = 4.81$ ;  $SD = 1.41$ ), attitude toward teachers and classes ( $M = 4.70$ ;  $SD = 1.15$ ), motivation/self-regulation ( $M = 4.86$ ;  $SD = 1.03$ ), respectively intrinsic motivation ( $M = 51.70$ ;  $SD = 13.17$ ); c) for emotional engagement with school ( $M = 4.40$ ;  $SD = 0.97$ ), social support from peers ( $M = 3.32$ ;  $SD = 0.60$ ), the clarity, consistency, and strictness of the rules promoted in school ( $M = 3.19$ ;  $SD = 0.52$ ), academic self-perception ( $M = 4.94$ ;  $SD = 0.91$ ), academic goal valuation ( $M = 5.46$ ;  $SD = 1.11$ ), extrinsic motivation ( $M = 61.74$ ;  $SD = 12.31$ ), and motivation for future achievement ( $M = 4.21$ ;  $SD = 0.53$ ), the scores were moderate to high; d) for behavioral engagement with school ( $M = 4.94$ ;  $SD = 0.88$ ), high school students showed a tendency to obtain a high score.

There were no significant problems with the normality of the distributions for the analyzed variables. Thus, the absolute values of the *skewness* were between 0.005 and 1.03. Except for the distributions for the affective and behavioral engagement with school, amotivation and motivation for future achievement, the distributions for all other variables showed values of the *skewness* that did not exceed the limits  $[-0.80; 0.80]$ . For the *kurtosis*, the absolute values were between 0.002 and 1.13. Except for the distributions for behavioral engagement with school and future achievement motivation, the distributions for all other variables showed values that fell within the range  $[-1.00; 1.00]$ . These results highlight the quasinormality of the distributions for almost all variables of interest and justify the use of multivariate statistical tests to verify the working hypotheses.

### 4.2. Comparative data

For cognitive engagement ( $t = -1.76$ ;  $p = 0.078$ ), affective engagement ( $t = 1.17$ ;  $p = 0.243$ ), and total engagement with school ( $t = -0.01$ ;  $p = 0.990$ ), the differences between girls' and boys' scores were not statistically significant. For behavioral engagement, boys scored a significantly lower mean than girls ( $t = -2.24$ ;  $p = 0.026$ ). However, the effect size was low ( $d_{\text{Cohen}} = 0.19$ ). Also, for agentic engagement, boys scored significantly higher than girls ( $t = 2.35$ ;  $p = 0.019$ ), with a low effect size ( $d_{\text{Cohen}} = 0.20$ ). Therefore, the gender of the participants was not taken into account as an independent variable in the multiple linear regression analyses.

School level had no statistically significant overall effects on scores for cognitive engagement ( $F = 1.73$ ;  $p = 0.160$ ), agentic engagement ( $F = 2.14$ ;  $p = 0.094$ ), and total engagement with school ( $F = 1.92$ ;  $p = 0.125$ ). In contrast, for affective engagement ( $F = 4.85$ ;  $p = 0.002$ ;  $f_{\text{Cohen}} = 0.16$ ) and behavioral engagement ( $F = 6.73$ ;  $p < 0.001$ ;  $f_{\text{Cohen}} = 0.19$ ), the differences were statistically significant. However, effect sizes were modest.

Family status did not reveal statistically significant global effects on scores for cognitive ( $F = 0.42$ ;  $p = 0.653$ ), affective ( $F = 0.73$ ;  $p = 0.482$ ), behavioral ( $F = 0.86$ ;  $p = 0.423$ ), agentic ( $F = 2.69$ ;  $p = 0.068$ ) and total engagement ( $F = 0.71$ ;  $p = 0.492$ ).

### 4.3. Correlational analysis

The absolute values of the correlations between cognitive engagement with school and the other variables of interest were between 0.13 and 0.60 (see Table 1). All correlations were statistically significant ( $p < 0.01$  or  $p < 0.001$ ). Cognitive engagement correlated most

consistently with the dimensions operationalized by the items of the SAAS-R, respectively with intrinsic motivation. The correlation between cognitive engagement and amotivation was negative (as expected), statistically significant, and of appreciable magnitude.

**Table 1.** Correlations between facets of engagement with school and other variables

| Variables                               | Engagement with school |                  |                   |                |              |
|---|------------------------|------------------|-------------------|----------------|--------------|
|   | <i>Cognitive</i>       | <i>Affective</i> | <i>Behavioral</i> | <i>Agentic</i> | <i>Total</i> |
| Academic expectation                    | 0.27 ***               | 0.08             | 0.20 ***          | 0.16 **        | 0.27 ***     |
| General attitude toward school          | 0.33 ***               | 0.48 ***         | 0.39 ***          | 0.19 ***       | 0.55 ***     |
| Academic self-perception                | 0.40 ***               | 0.28 ***         | 0.37 ***          | 0.27 ***       | 0.52 ***     |
| Attitude toward teachers and classes    | 0.40 ***               | 0.43 ***         | 0.44 ***          | 0.28 ***       | 0.60 ***     |
| Academic goal valuation                 | 0.42 ***               | 0.22 ***         | 0.43 ***          | 0.18 ***       | 0.48 ***     |
| Motivation/self-regulation              | 0.60 ***               | 0.21 ***         | 0.51 ***          | 0.28 ***       | 0.62 ***     |
| Amotivation                             | - 0.29 ***             | - 0.24 ***       | - 0.37 ***        | - 0.06         | - 0.38 ***   |
| Extrinsic motivation                    | 0.35 ***               | 0.22 ***         | 0.26 ***          | 0.22 ***       | 0.41 ***     |
| Intrinsic motivation                    | 0.45 ***               | 0.27 ***         | 0.28 ***          | 0.36 ***       | 0.54 ***     |
| Achievement motivation                  | 0.22 ***               | 0.22 ***         | 0.26 ***          | 0.13 **        | 0.32 ***     |
| Support from teachers                   | 0.37 ***               | 0.31 ***         | 0.23 ***          | 0.29 ***       | 0.47 ***     |
| Support from peers                      | 0.11 **                | 0.51 ***         | 0.23 ***          | 0.08 *         | 0.37 ***     |
| Autonomy                                | 0.29 ***               | 0.17 ***         | 0.03              | 0.29 ***       | 0.31 ***     |
| Clarity and consistency of school rules | 0.12 **                | 0.03             | - 0.01            | 0.13 **        | 0.10 *       |
| Quality of instructional practices      | 0.31 ***               | 0.25 ***         | 0.23 ***          | 0.23 ***       | 0.40 ***     |

Note: \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$  (two-tailed)

The absolute values of the correlations between affective engagement with school and the other variables were between 0.03 and 0.51. Correlations with academic expectation ( $p = 0.148$ ), respectively the clarity, consistency, and strictness of the school rules ( $p = 0.489$ ) had negligible magnitudes and were not statistically significant. The most consistent correlations were obtained between affective engagement and general attitude toward school, attitude toward teachers and classes, respectively support from peers. Correlations with amotivation, extrinsic and intrinsic motivation, respectively with motivation for future achievement were statistically significant ( $p < 0.001$ ), but had lower magnitudes.

Behavioral engagement correlated with the other variables with magnitudes between 0.01 and 0.51. Correlations with the autonomy granted to students in the learning process ( $p = 0.486$ ), respectively the clarity, consistency, and strictness of the rules promoted in the school ( $p = 0.677$ ) had negligible values. Correlations with academic expectancy, teacher and peer support, quality of instructional practices, extrinsic motivation, intrinsic motivation, and motivation for future achievement were statistically significant, but had lower magnitudes. The negative correlation between behavioral engagement with school and amotivation was negative and statistically significant. The most consistent correlations ( $r = 0.37 - 0.51$ ;  $p < 0.001$ ) were observed between behavioral engagement and dimensions of attitude toward school.

Agentic engagement revealed more modest correlations with the other variables of interest ( $r = 0.06 - 0.36$ ). The most consistent correlation emerged with intrinsic motivation. Appropriate correlations of 0.30 were obtained for social support from teachers, autonomy granted to students, attitude toward teachers and classes, respectively motivation/self-regulation. Correlations with academic expectation, the general attitude toward school, academic goal valuation, motivation for future achievement, and support from peers, respectively the clarity, consistency, and strictness of school rules were statistically significant, but had low magnitudes. Also, the correlation between agentic engagement with school and amotivation was of negligible magnitude.

Total engagement with school revealed consistent correlations with the general attitude toward school, extrinsic motivation, intrinsic motivation, amotivation, support from teachers and the quality of instructional practices. In contrast, the correlation with the clarity, consistency, and strictness of school rules was very modest.

#### **4.4. Multiple linear regression analyses**

Given the results of the correlational analysis, 12 independent variables were considered in the regression models in which the criterion variables were the school engagement scores. Controlling multicollinearity is a necessary condition for performing multiple linear regression analysis. The values of the 66 resulting correlations were between 0.02 and 0.72 ( $m_{\text{correlations}} = 0.39$ ;  $\text{median}_{\text{correlations}} = 0.39$ ). About 73% of the total correlations were  $\leq 0.50$ . Sixty-five of the correlations were statistically significant at the  $p < 0.01$  or  $p < 0.001$  thresholds. Four correlations of 0.65 were highlighted, namely between: general attitude toward school – attitude toward teachers and classes, attitude toward teachers and classes – support from teachers, academic goal valuation – motivation/self-regulation, extrinsic motivation – intrinsic motivation. Taking these collinearities into account, 31 regression models were tested, namely 12 for cognitive engagement, two for affective engagement, four for behavioral engagement, one model for agentic engagement, respectively 12 models for total engagement with school. In the following, we will briefly refer to these models.

Multiple correlation values between the sets of independent variables and the cognitive engagement score ranged from 0.54 to 0.63. The overall explanatory power of the regression models ranged between 28.3% and 39.5%. Motivation/self-regulation in the learning process emerged as the most consistent predictor of cognitive engagement with school. In all regression models, this variable explained between 9% and 11.15% of the variance in the score that high school students obtained for cognitive engagement. Likewise, academic self-perception, intrinsic motivation, and the autonomy granted to students had individual contributions worthy of consideration ( $r^2_{\text{sp}} > 2\%$ ). In contrast, amotivation, academic goal valuation, and support from teachers had modest individual contributions ( $r^2_{\text{sp}} = 1.06\% - 1.9\%$ ). Also, extrinsic motivation and general attitude toward school had low explanatory powers ( $r^2_{\text{sp}} = 0.51\% - 0.67\%$ ).

The regression model in which the criterion was affective engagement with school was statistically significant ( $R = 0.59$ ;  $F_R = 96.02$ ;  $p < 0.001$ ). Together, the independent variables explained 34.8% of the variance in the affective engagement score. General attitudes toward school and social support from peers were positive predictors. The first of the two variables explained 6.96% of the variance of the affective engagement score, and the second 11.35%. A second regression model was tested in which the general attitude toward school was replaced by the attitude toward teachers and classes and social support from teachers was removed. This pattern was also statistically significant ( $R = 0.57$ ;  $F_R = 130.16$ ;  $p < 0.001$ ). The independent variables together explained 32.6% of the variance in the affective engagement score. Both attitude toward teachers and classes ( $r^2_{\text{sp}} = 6.35\%$ ) and social support from peers ( $r^2_{\text{sp}} = 14.51\%$ ) were positive predictors.

The regression models in which behavioral engagement with school represented the criterion were statistically significant ( $R = 0.53 - 0.67$ ;  $F_R = 51.76 - 63.58$ ;  $p < 0.001$ ). The overall explanatory power of these models ranged between 27.6% and 45.2%. Academic self-perception ( $r^2_{\text{sp}} = 3.31\%$ ), amotivation ( $r^2_{\text{sp}} = 2.68\% - 3.72\%$ ), attitude toward teachers and classes ( $r^2_{\text{sp}} = 2.75\%$ ), academic goal valuation ( $r^2_{\text{sp}} = 3.31\%$ ), respectively motivation/self-regulation ( $r^2_{\text{sp}} = 5.10\% - 7.02\%$ ) stood out as predictors of behavioral engagement. Amotivation was a negative predictor, and the rest of the variables were positive predictors. Again, motivation/self-regulation in the learning process emerged as the most consistent predictor. Academic self-perception, amotivation, attitude toward teachers and classes, and the academic goal valuation also had fairly consistent contributions. The general attitude toward school had somewhat more modest predictive power.

The regression model in which agentic engagement was the criterion was statistically significant ( $R = 0.41$ ;  $F_R = 37.11$ ;  $p < 0.001$ ). Together, the independent variables explained approximately 17% of the variance in the criterion score. All variables were positive predictors of agentic engagement with school, but intrinsic motivation had the most consistent contribution ( $r^2_{sp} = 6.7\%$ ). Social support from teachers and student autonomy had low predictive powers.

All 12 regression models in which the dependent variable was total engagement with school were statistically significant ( $R = 0.69 - 0.73$ ;  $F_R = 51.00 - 68.38$ ;  $p < 0.001$ ). Together, the independent variables explained between 47.3% and 53.4% of the variance in the total engagement score. Academic self-perception ( $r^2_{sp} = 2.25\% - 3.8\%$ ), intrinsic motivation ( $r^2_{sp} = 2.43\% - 4.7\%$ ), motivation for future achievement ( $r^2_{sp} = 1.16\%$ ), general attitude toward school ( $r^2_{sp} = 1.21\% - 1.51\%$ ), attitude toward teachers and classes ( $r^2_{sp} = 2.72\% - 3.31\%$ ), academic goal valuation ( $r^2_{sp} = 0.43\%$ ), motivation/self-regulation ( $r^2_{sp} = 2.34\% - 4.79\%$ ), social support from teachers ( $r^2_{sp} = 2.75\%$ ), social support from peers ( $r^2_{sp} = 2.10\% - 2.95\%$ ), respectively the autonomy granted to students ( $r^2_{sp} = 0.34\% - 0.73\%$ ) were positive predictors of total engagement with school. Amotivation ( $r^2_{sp} = 2.07\% - 3.92\%$ ) stood out as a negative predictor.

## 5. Limitations

The findings of the present study should be analyzed with the following methodological limitations in mind:

- The participants were students recruited from public high schools located in both urban and rural areas. In addition, the recruitment pool was made up of high schools selected from the geographical and economic regions located in the North-East and East of Romania (Moldova). In future investigations, we aim to use more heterogeneous samples in terms of demographic variables that may have a significant impact on adolescent adjustment to schooling tasks. We refer to the residence, the socio-economic status of the family-of-origin, the public education sector *vs.* private, geographic and economic region, etc.
- Variables of interest for the current study were operationalized using standardized questionnaires, to which the adolescents answered anonymously. This method for collecting raw data raises the possibility of distorting the results, through the lack of sincerity of the participants, either as a result of the intervention of defensive mechanisms activated to protect the self-image and/or self-esteem, or as a result of the intervention of the effect of the social desirability of the answers (Demetriou, Uzun Ozer, & Essau, 2015). In future studies, we propose to use other ways to assess the individual characteristics of adolescents. For example, the teachers of the classes from which the students will be recruited may be asked to answer questionnaires that look at students' attitudes toward school, motivation for learning, and engagement in (extra)curricular activities. Also, answers to standardized questionnaires can be supplemented with interviews carried out individually. This method of investigation offers the possibility of obtaining a richer picture of the factors that contribute to the involvement of students in the instructional process in school.
- The items of the SES/4-DS instrument allowed us to operationalize four dimensions of school engagement in general, without the possibility of differentiating a student's engagement with certain learning goals, such as a preference for one school subject or another. A student can show a particular interest in a certain school subject, in which he achieves very good results, without experiencing the same attraction for the rest of the subjects. In future studies, we aim to cover this limit.
- Another limitation is the cross-sectional nature of the design on which the study was based. The dimensions of our focus were measured simultaneously, and working hypothesis testing was performed using multiple linear regression analysis. The two

methodological aspects limited our possibility of interpreting the relationships between the facets of school engagement and the other variables in terms of causality. In future investigations, we propose a longitudinal approach and the use of statistical analysis methods appropriate to this type of design (e.g., generalized estimating equations or latent growth curve analysis). Such advanced statistical methods allow us to highlight the temporal dynamics of the relationships between engagement with school and its causal factors, respectively its effects.

## **6. Practical implications**

Interest in the concept of school engagement has been stimulated by the desire of educational policy professionals and educational researchers to improve the quality of the instructional process by stimulating students' involvement in learning activities and promoting their motivation to remain engaged in their educational paths. Over the years, a rich body of evidence has accumulated showing that engagement is both a malleable psychological state that can be shaped in the school context and a robust predictor of learning-oriented behaviors, better scores on academic achievement tests, as well as the risk of school dropout or repetition (Caranfil & Robu, 2017). Moreover, engagement with school has been included in a multilevel model of positive development and resilience among children and adolescents (Skinner & Pitzer, 2012). According to this model, engagement with school, church, family, youth groups, or other community institutions acts as a protective factor because it protects children and adolescents against risky and delinquent behaviors, as well as academic underachievement and early dropout.

Beyond the methodological limitations inherent in a study based on the administration of standardized questionnaires, the findings of our study have theoretical and practical implications. From a *theoretical* point of view, they can be added to the body of evidence regarding the variables that contribute to facilitating the positive attitude that adolescents have toward school and the efforts aimed at thorough preparation. To prevent adolescent school disengagement and decline in motivation to learn and succeed, school counselors, principals, teachers, and parents of at-risk high school students must join and channel their efforts to manage vulnerabilities that may appear along the developmental pathway. In this sense, psychological and educational support programs can integrate the dimensions that have emerged as consistent predictors of engagement with school.

From a *practical* point of view, the study we carried out suggests that, in the intervention effort in the case of adolescents who display a negative attitude toward school, it is necessary to evaluate individual characteristics (e.g., the image that a student has of his/her academic skills, intrinsic motivation for individual study, skills involved in self-regulation of learning, etc.) and external resources (e.g., the support a student receives from teachers and peers). From the beginning of the high school education cycle, the assessment of cognitive, emotional, attitudinal-behavioral, motivational, and social characteristics can be carried out, to identify and monitor through counseling students who are at risk of disengagement with school activities and, through this, vulnerability for partial or total school failure, respectively for premature abandonment of the educational path. It is also necessary to assess the specific family and school characteristics of each student. They act either as risk factors or as protective factors concerning slippages that can threaten a student's school adjustment. This approach can bring more information on the causes of disengagement with the constant efforts that are necessary to continue the educational path and can suggest practical directions in which to intervene.

In addition to controlling individual and family factors, intervention measures must focus on resizing curriculum contents and instructional strategies, so that they better respond to the particularities of development and the educational needs of current generations of young people. Increasing the attractiveness of curricular contents, designing lessons in an integrative manner, using strategies and interactive instructional methods, individual mentoring to stimulate critical

thinking and creativity, and empowering teenagers in the process of their education is part of the urgently needed changes in the Romanian education system, for it to respond to current social, economic and cultural challenges. Through measures aimed at increasing autonomy in the learning process, children and adolescents will strengthen their ability to assert their interests in knowledge and training in a global society where the service sector and entrepreneurship predominate. When young people perceive school as an educational environment that takes into account their interests and preferences, as well as the skills they can put into practice, they will be more intrinsically motivated to actively participate in the process of their development.

## 7. Conclusions

Engagement with school includes a set of perceptions, cognitions, beliefs, affective states, and behaviors that are influenced by attitudinal-motivational structures, as well as by external factors (e.g., the development of the community in which the student grows up, the characteristics of the family environment, the coordinates of the climate promoted in the schools, the quality of instructional interventions, etc.). All these variables play a predictive role and explain the differences between students of various ages in terms of involvement in learning activities specific to the educational path, responses to the training activities carried out in school, attachment to the values of authentic (self)education, the feeling of belonging to a school, motivation for academic achievement, motivation for career in a certain professional field, etc.

The measurement of engagement with school in a consistent sample of Romanian high school students led to the identification of predictors for each of the focused dimensions: for cognitive and behavioral engagement – motivation for learning and self-regulation of efforts oriented toward this essential goal for the schooling path; for affective engagement – general attitude toward school and social support from peers; for agentic engagement – intrinsic academic motivation. Other variables that highlighted contributions of practical importance to explaining the differences between adolescents in terms of the cognitive and behavioral dimensions of engagement were academic self-perception, amotivation, and attitude toward teachers and classes. Data from the regression models provided partial support for almost all working hypotheses.

The model of predictors of school engagement, which we highlighted in the current study, can be used in other investigations that are concerned with the factors that contribute to the quality of the educational path of students. Our findings can be applied as a basis for the development of educational counseling programs addressed to the individual vulnerabilities of students, as well as in interventions aimed at increasing the attachment of adolescents to school and assuming responsibility for their future development.

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