The motivation to learn in adolescence and the emergency remote education

A motivação para aprender na adolescência e o ensino remoto emergencial

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ABSTRACT

Purpose: this study aims to analyze the association between motivation to learn and adaptation to the ERT of students in the 9th year of Elementary School and 1st, 2nd and 3rd years of High School in a privately funded institution. **Methods:** this is an observational, analytical and cross-sectional study, in which 68 adolescents participated, authorized by their parents, who answered three questionnaires through the Google Forms platform, namely: Questionnaire for the Characterization of Participants; Learning Motivation Scale (EMAPRE) and Remote Learning Adaptation Questionnaire. **Results:** the association analysis showed that students with high motivation felt better adapted to the ERT. In addition, it showed that girls with low motivation were more inclined to avoid negative situations than boys. **Conclusion:** it was concluded that intrinsic motivation may have influenced the adaptation to ERT and that girls may have been motivated to avoid school failure in a way that didn't harm their personal emotional issues.

Keywords: Motivation; Learning; Adolescent; Adaptation; Pandemics

RESUMO

Objetivo: analisar a associação entre a motivação para aprender e a adaptação ao ensino remoto emergencial (ERE) de estudantes do 9º ano do ensino fundamental e 1º, 2º e 3º anos do ensino médio de uma instituição de financiamento privado. **Métodos:** trata-se de estudo observacional, analítico e transversal, do qual participaram 68 adolescentes, autorizados pelos pais ou responsáveis, e que responderam a três questionários, por meio da plataforma *Google Forms*: Questionário de Caracterização dos Participantes; Escala de Motivação para a Aprendizagem e Questionário sobre a Adaptação ao Ensino Remoto. **Resultados:** a análise de associação demonstrou que estudantes com alta motivação se sentiram mais bem adaptados ao ERE. Além disso, mostrou que as adolescentes com baixa motivação se orientaram de modo a evitar situações negativas, mais do que os adolescentes. **Conclusão:** a motivação intrínseca pode ter influenciado a adaptação ao ensino remoto emergencial e as adolescentes podem ter sido motivadas a evitar o insucesso escolar, de modo que não prejudicasse suas questões emocionais pessoais.

Palavras-chave: Motivação; Aprendizagem; Adolescentes; Adaptação; Pandemia

INTRODUCTION

In early 2020, the World Health Organization (WHO) declared the new coronavirus (SARS-CoV-2) outbreak a Public Health Emergency of International Concern (PHEIC), which is its highest alert level[1]. Hence, all countries had to take measures to mitigate the appearance of new cases of the disease, while the strategies to reduce virus transmissibility influenced the dynamics of education, establishing emergency remote teaching (ERT).

ERT during the pandemic comprised didactic and pedagogic strategies to diminish the impacts of social isolation measures on learning. It was verified that remote teaching via online platforms poses both limitations and opportunities to children, adolescents, and families[2]. The new reality affected the construction of knowledge and the development of skills on all teaching levels. Although part of the students adjusted well to the new modality, others had difficulties. Families faced challenges to manage and supervise their children's learning, due to the lack of either practice or availability necessary for the activities[3].

The virtual context kept students from in-person contact with their classmates, teachers, and the school setting. This imposed on adolescents a new studying dynamic and rhythm, possibly weakening relationships and causing frustration and depression[4]. These conditions can influence learning motivation, which is considered an important factor for successful learning.

Theories on educational psychology classify motivation into intrinsic and extrinsic[5] – the former is related to personal motivation and associated with internal stimuli, while the latter is related to the environment and external factors. A study in middle-school adolescents from Rio Grande do Norte, Brazil, revealed that extrinsic motivation and discouragement indices increased significantly due to remote teaching during the pandemic[6].

Teachers were also found to be discouraged and lack strategies, increasing the number of school dropouts, who did not have resources or could not adjust to the modality – which raised concern among various school professionals and researchers[7]. Hence, these students' learning motivation during the pandemic must be considered, as it can influence not only the current school years but also their whole academic lives.

Given the impact of the pandemic on children and adolescents' education, this study aimed to analyze the association between adjustment to ERT and learning motivation in 9th- to 12th-grade students.

METHODS

This cross-sectional, analytical, observational study had a non-probabilistic sample of 68 students who attended 9th to 12th grades at a private school in Belo Horizonte, MG, Brazil. The research was approved by the Research Ethics Committee of the Federal University of Minas Gerais – CEP-UFMG, under evaluation report no. 4.446.496. The participating adolescents and their parents/guardians agreed with and respectively signed online informed assent and consent forms.

The study used the following instruments: a questionnaire to characterize participants, the Learning Motivation Evaluation Scale (EMAPRE)[8], and a questionnaire on the adjustment to remote teaching. They were answered remotely via Google Forms between April and June 2021.

The questionnaire to characterize participants was used to obtain the adolescents' sociodemographic data, such as age, sex, and grade in school. Their learning motivation was assessed with EMAPRE, which is divided into three domains: Learning Goal, in which students are self-driven to learn and face the challenges; Performance-Approach Goal, in which students, besides learning, strive to be better than their classmates in school activities; and Performance-Avoidance Goal, in which students avoid situations that will put them to the test and consequently, to the risk of unsuccessful learning.

The adjustment to remote teaching was assessed with a scale developed by the researchers. It classified participants as "often discouraged to study, learn, and do school activities", "in the process of adjusting to the new teaching and learning format, though not always motivated to do activities or participate actively in class", or "well-adjusted to ERT, doing activities successfully".

The response variable in this study was the questionnaire on the adjustment to remote teaching, while the explanatory variables were the learning motivation (according to the Learning Goal, Performance-Approach Goal, and Performance-Avoidance Goal), sex, age, and grade in school. Data were entered and processed in SPSS software, version 20.0. Quantitative variables were recoded as nominal qualitative variables for analysis, using the median score in each goal as a reference. The association analyses used Pearson's chi-square and Fisher's Exact tests, considering statistically significant the associations whose p-values were ≤ 0.05.

RESULTS

Most study participants were females (57.35%), and 9th graders were the most prevalent (32.4%), while 23.5% were in 10th grade, 20.6% were in 11th grade, and 23.5% were in 12th grade.

The association analysis between learning motivation domains and selected variables showed statistically significant associations between the Performance-Avoidance Goal and sex (p = 0.039) and between the Learning Goal and the adjustment to ERT (p = 0.038).

Most adolescents were in the process of adjusting to ERT (69.1%), while 12.8% of them were already adjusted. In the Learning Goal, most of the highly motivated (71.8%) and low-motivated students (65.5%) were in the process of adjusting to ERT. It is important to note that 34.5% of these were discouraged. In the Performance-Avoidance Goal, high motivation was more prevalent in male adolescents (52.4%), whereas females predominated among those with low motivation (73.1%). Regardless of the motivation, most of them were in the process of adjusting to ERT. Moreover, none of the low-motivated students felt adjusted to ERT, whereas among highly motivated ones, 11.9% were adjusted (Table 1).

DISCUSSION

The results demonstrated a prevalence of the Learning Goal. This domain is associated with intrinsic motivation, usually related to using more effective learning strategies influenced by interest, joy, aspiration, ambition, attitude, and physical and psychological condition[9]. These factors were greatly impacted during the pandemic, which triggered anxiety and stress in most of the population, quickly affecting their motivation and socialization, regardless of their socioeconomic status[10].

Table 1. Associative analysis between learning motivation and selected variables

Characteristics	Learning Goal Motivation		Performance-Approach Goal Motivation		Performance-Avoidance Goal Motivation		
	Low N(%)	High N(%)	Low N(%)	High N(%)	Low N(%)	High N(%)	
Sex							Total (%)
Females	17 (58.6)	22 (56.4)	21 (63.6)	18 (51.4)	19 (73.1)	20 (47.6)	39 (57.4)
Males	12 (41.4)	17 (43.6)	12 (36.4)	17 (48.6)	7 (26.9)	22 (52.4)	29 (42.6)
p-value*	0.855		0.309		*0.039*		
Grade in school							Total (%)
9th grade	10 (34.5)	12 (34.3)	10 (30.3)	12 (34.3)	10 (38.5)	12 (28.6)	22 (32.4)
10th grade	5 (17.2)	11 (28.2)	7 (21.2)	9 (25.7)	3 (11.5)	13 (31.0)	16 (23.5)
11th grade	6 (20.7)	8 (20.5)	8 (24.2)	6 (17.1)	7 (26.9)	7 (16.7)	14 (20.6)
12th grade	8 (27.6)	9 (20.5)	8 (24.2)	8 (22.9)	6 (23.1)	10 (23.8)	16 (23.5)
p-value**	0.759		0.917		0.264		
Adjustment to ERT							Total (%)
Discouraged	10 (34.5)	6 (15.4)	8 (24.2)	8 (22.9)	7 (26.9)	9 (21.4)	16 (23.5)
Adjustment process	19 (65.5)	28 (71.8)	23 (69.7)	24 (68.6)	19 (73.1)	28 (66.7)	47 (69.1)
Adjusted to ERT	0 (0.0)	5 (12.8)	2 (6.1)	3 (8.6)	0 (0.0)	5 (11.9)	5 (7.4)
p-value**	*0.038*		1		0.226		

*Chi-square; **Fisher's exact test
Subtitle: N = Number of individuals; % = Percentage; ERT = Emergency remote teaching

Remote teaching was assessed as poor to moderate, regardless of sex and grade in school, although girls had a higher classification mean in this teaching modality than boys. Adolescents may have felt psychologically vulnerable due to social isolation (given the importance of interacting with peers and in groups at this age), thus influencing their learning motivation. A study on mental health pointed out that adolescents commonly transit through the uniformity process, in which they enjoy being around their closest friends, making them feel more confident[11].

Girls scored higher in the Performance-Avoidance Goal, demonstrating a trend toward using extrinsic motivation. A study conducted in high school adolescents of Rio Grande do Sul, Brazil, showed a negative correlation between self-effectiveness and extrinsic motivation; also, girls had higher means in intrinsic motivation and boys, in extrinsic motivation[12]. Researchers explain that the construct of self-effectiveness is a key component in the cognitive social theory of Albert Bandura[13], defined as each person's beliefs in their own capacities, determining their thoughts, motivations, and behaviors. The authors argue with the suggestion that, regardless of their ages, female adolescents have more intense emotions than male ones[12].

Regarding the limitations of the study, it must be highlighted that ERT made access to education even more unequal in different socioeconomic contexts. Quality Internet access in Brazil is insufficient, and the resources used are not always appropriate for studying[14]. Moreover, the need for adolescents to help their families financially and the risk of food insecurity must be considered[15]. Thus, approaching motivation based on the experience of the specific population of this study limits the discussion on contextual influences that celebrate learning. Therefore, these findings cannot be generalized to students of other educational realities. Nonetheless, these results demonstrate behavior nuances of adolescents from a specific social setting coping with a unique educational context. Hence, the study verified the applicability of intrinsic motivation to learning, as a tool to help students adjust to educational dynamics that are not in person. The study also led to reflections on how emotional factors peculiarly influence learning motivation during remote teaching.

CONCLUSION

Considering the pandemic circumstances and the socioeconomic and educational context of the research group, girls may have been more affected regarding their personal (intrinsic) learning motivation. This explains their tendency of doing academic activities motivated by avoiding negative situations, preventing academic failures from worsening personal issues. Thus, this study contributes to the discussion on the importance of intrinsic motivation to adjust to more challenging educational contexts. It also highlights the importance of studying this construct among adolescents, whose phase in life is characterized by the process of consolidating various behaviors and socioemotional skills.

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