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## Abstract

### Keywords:

control group, intervention, Rational Emotional Behavioral Therapy, REBT, students

This study centers on the implementation of a group intervention utilizing Rational Emotive Behavioral Therapy in two Romanian high schools. Rational Emotive Behavior Therapy (REBT) was formulated by psychologist Albert Ellis in the 1950s as a derivative of cognitive behavioral therapy. The fundamental aim of REBT treatment is to help clients understand and manage illogical ideas and unpleasant emotions that may be causing them psychological suffering. REBT treatment typically addresses anxiety, sadness, stress, aggressiveness, drug addiction, and other psychological disorders. This article's pragmatic and outcome-oriented approach attracts those aiming to improve their emotional and mental health. This project targets 10th grade students from the National College "Traian Lalescu" and the Theoretical High School "Traian Vuia," both located in Reșița, Romania. The intervention in this study comprises four group sessions, each with a duration of 50 minutes. The study incorporated a control group including 10th grade students participating in psychology courses within their academic curriculum. The experimental group consisted of students designated to participate in four group sessions centered on the concepts of Rational Emotive Behavioral Therapy. This study seeks to enhance psychological well-being and alleviate student stress within an academic setting through a psychological intervention using a personal development program grounded in Rational-Emotive and Behavioral Therapy. Rational Emotive Behavior Therapy (REBT) is a psychotherapy method that targets emotional and behavioral challenges to assist individuals in attaining pleasure and satisfaction.

## 1. Introduction

Rational Emotive Education (REE) is an approach that tries to meet the goals of cultivating critical thinking, problem-solving, and social and emotional competences in students. It is implemented in educational settings with the intention of achieving these objectives. An educational strategy that is based on the ideas of Rational Emotive Behavior Therapy, rational-emotive education (REE) is a preventative educational method that was developed for children and adolescents during important periods of cognitive development (Kabasakal et al., 2020). The REE distinguishes between rational and irrational beliefs in addition to positive and negative emotions. REE classrooms facilitate an examination of the ways in which irrational beliefs impact children's conduct, instill a sense of personal accountability for one's actions, instruct methods to rectify maladaptive behavior, and promote healthy substitutes for detrimental routines (LaConte et al., 1993).

Although the primary objectives of REBT or REE in educational settings for children and adolescents are comparable to those for adults, the particular

approaches employed may vary according to student intelligence and cognitive development (Bernard, 2004).

## 2. Theoretical foundation

Rethinking individuals as substantial, cogent, and goal-oriented beings is the premise upon which rational-emotive behavior therapy (REBT) operates, according to Ellis (1986). Activating Beliefs, Consequences, or ABC, is the foundation of RBT, which aims to enhance emotional state and encourage rational responses to real-world situations. Ellis (1986) argues that the development of irrational beliefs that result in psychological disorders in humans is significantly influenced by biology, according to the relational emotional behavior therapy (REBT) theory. In regard to the formation of the psyche, REBT theory emphasizes the interplay between biological and social factors. An association between tension and irrational beliefs concerning personal experiences is a common occurrence, according to Rational Emotive Behavior Therapy (REBT) (Ellis, 2002). To put it



differently, personal tension is not caused by external circumstances; instead, it stems from the irrational beliefs of the individual, which may include inflexible and illogical concepts or thought processes (Ellis & Bernard, 2006). By utilizing particular techniques, with an emphasis on argumentation techniques, the ABC model elucidates in detail and in an exhaustive manner how one can assist a person who holds irrational beliefs in the process of developing rational ones (Ellis, 2002; Dryden, 1995). According to Ellis (2002), the most efficacious approach to managing and controlling irrational beliefs is to modify the thought process or set of beliefs of the individual. The primary goal of Rational Emotive Behavior Therapy (REBT) is to diminish emotional disturbances, as irrational beliefs are recognized as the main source of stress (Ellis & Bernard, 2006; Vernon, 2004). To achieve this, irrational beliefs must be modified. David et al. (2017) found in their meta-analysis that REBT therapies, encompassing psychotherapy, education, and counseling, are effective for many disorders, irrespective of clinical state, age, or delivery format. Nonetheless, Effect sizes are influenced by the type of control condition. Further research is required to systematically evaluate the mechanisms of change in REBT and to test the associated change theory. The efficacy of REBT in reducing irrational beliefs was not influenced by the kind of intervention, including psychotherapy, educational activities, or counseling. This may result from the uniformity of REBT's scope and methodologies, which seek to alter the same categories of irrational beliefs irrespective of clinical condition or disease. David et al. (2017) found that certain REBT sessions aimed at distinct groups were equally effective, as the clinical state of the participants did not moderate the outcomes. In comparison to a control group, REBT had high effect sizes for distress and academic performance at posttest, and medium effect sizes for anger, behavioral outcomes, depression, emotional outcomes, health outcomes, and quality of life at posttest. Nonetheless, little yet notable effect sizes were produced for anxiety, cognitive results, and many other outcomes at posttest, as well as for quality of life at follow-up. The quality of the studies adversely predicted effect sizes at post intervention and follow-up, a result corroborated by earlier meta-analyses of cognitive-behavioral therapy.

Gonzales et al. (2004) and Engles et al. (1993) discovered that study quality did not have a statistically significant correlation with treatment efficacy, indicating no distinction between well-

executed and poorly executed research. The reduced effect sizes observed in REBT may be attributable to the implementation of more rigorous studies that effectively controlled for investigator allegiance bias. The attenuated effect sizes observed in REBT may be ascribed to the implementation of more rigorous studies that meticulously controlled for investigator allegiance bias. This is particularly pertinent given that such bias has been empirically demonstrated to inflate effect sizes. Trip et al. (2007) conducted a quantitative meta-analysis demonstrating that Reactive Emotional Emotion (REE) strongly influences several factors, including unpleasant emotions, actions, and illogical beliefs. To fully realize the promise of REE, enhancements in research, high-caliber studies, and standardized methodological criteria—such as clinical evaluation, protocol adherence, clinical significance, follow-up data collecting, and participant attrition—are essential.

Clark (2000) argues that the majority of individuals' thoughts and internal monologues can be identified as having originated during their young adulthood. Their social circles, parents, and other relatives, as well as the media, undoubtedly exerted an influence on them during this period. The formation of both rational and irrational attitudes is substantially impacted by a variety of factors. Several elements contribute to this, such as early life activities, interpersonal relationships, and media exposure. Significant environmental factors exert a substantial influence on the formation of belief systems. Among these are the effects on society, the media, and the family unit. Furthermore, individuals' perspectives are influenced by their life circumstances and the surroundings in which they reside, in addition to their inherent tendencies (Clark, 2000).

Rational Emotive Behavioural Therapy and Rational Behavioural Education are deployed with the aim of fostering enduring satisfaction. In accordance with the three fundamental categories of mental processes associated with individuals, REBT intervention centers on thoughts, feelings, and behaviors. By means of interactive activities such as games and narratives, rational-emotive behavioral education programs educate individuals on the ways in which illogical and inferential reasoning affects their emotions and behavior. The impact of cognitions on behavior and emotions is heavily emphasized across all aspects of the curriculum in rational emotional behavioral education. In light of various challenges, parental rejection, taunting, academic setbacks, criticism, unjust treatment, or academic failure, children and adolescents of the same age may exhibit

varying degrees of adaptive and maladaptive emotions and behaviors. Further investigation of the affective attributes of pupils in educational contexts is crucial, as emphasized by Rogers and Saklofske (1985). Academic performance and learning are significantly influenced by intrapersonal noncognitive variables, according to Boyle (1987). Significant differences in how pupils react to the same incident in school and other contexts are acknowledged by Rational Emotive Behavior Therapy (DiGiuseppe, 1990).

The meta-analysis done in a prior report by the research team on logical Emotive Behavior Therapy (REBT) demonstrates considerable effects on numerous variables, including emotions, anxiety, logical beliefs, and academic performance. Nonetheless, the constraints of REBT studies require attention, and rigorous research should be undertaken. The meta-analysis reveals that REBT therapy, encompassing educational or counseling interventions, can effectively diminish anxiety in children and adolescents. Nonetheless, further study is required under the contemporary skill or accomplishment framework, emphasizing the rationality of children and adolescents. David et al. (2017) also found that Reactive Emotional Emotion (REE) treatments work for a wide range of illnesses, regardless of the person's clinical state, age, or delivery method. The control state does have an effect on Effect Size, though. More study is needed to look into how change happens in REBT and to test the idea that goes with it. Gonzales et al. (2004) and Engles et al. (1993) both found that internal validity was not significantly linked to treatment effectiveness. The reduced effect sizes observed in REBT may be attributable to the implementation of more rigorous studies that effectively controlled for investigator allegiance bias. The attenuated effect sizes observed in REBT may be ascribed to the implementation of more rigorous studies that meticulously controlled for investigator allegiance bias. This is particularly pertinent given that such bias has been demonstrated to inflate effect sizes Gonzales et al., (2004). Trip et al. (2007) discovered that REE has a big effect on things like bad feelings, actions, and views that don't make sense. To fully achieve REE's promise, research needs to get better, studies need to be of higher quality, and methodological standards need to be defined. Also, things like how people felt about school or how motivated they were to learn weren't looked at as much in the studies that were part of the metaanalysis.

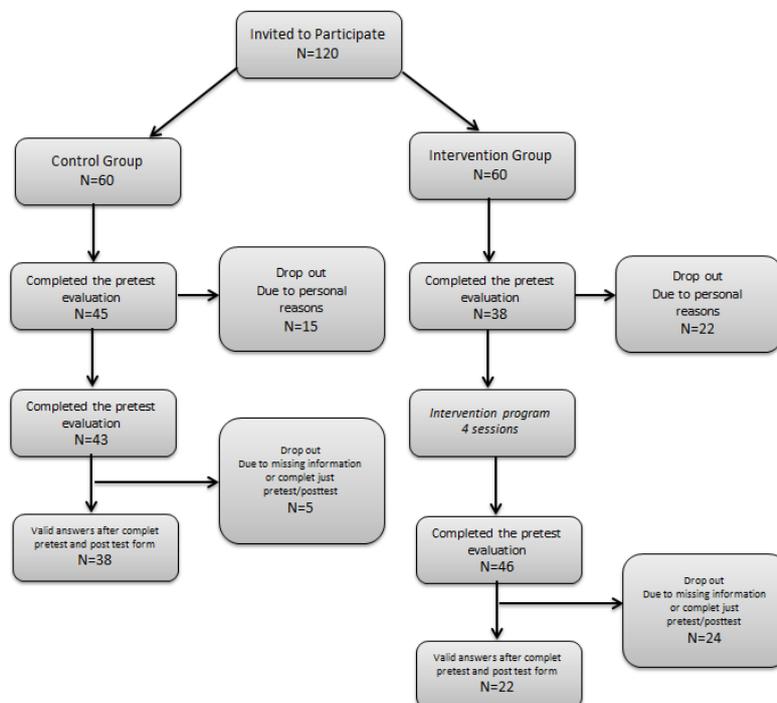
### 3. Research methodology

The research employed a quasi experimental design, utilizing a pre-test and post-test control group design. The objective of this research is to assess the effectiveness of REBT intervention in high school students by improving psychological well-being and reducing stress within an academic environment. This will be achieved via a psychological intervention in the form of a personal development program that is rooted in Rational-Emotive and Behavioral Therapy. Rational Emotive Behavior Therapy (REBT) is a psychotherapy method designed to address emotional and behavioral challenges, facilitating individuals in attaining happiness and fulfillment in their life.

#### 3.1. Participants

Figure 1

Flow of participants included



The research included 120 tenth-grade students from 4 different classrooms from 2 different high schools located in the western region of Romania (Graph 1). Two classrooms from each school. One classroom from each high school served as the control group, and the other as the treatment group. Making up a total of 2 control groups and 2 treatment groups. All classrooms participating in the research were focused on science, and included one psychology class each week in the curriculum. In the treatment groups the psychology class was replaced by REBT interventions, administered by a psychologist with a degree in education. In contrast, the control groups attended normal psychology lectures as per usual.

### 3.2. Instrument

▪ *The General Attitudes and Beliefs Scale (GABS)*, comprising 26 items based on REBT approach, designed to assess rationality and irrationality, additionally incorporates the following dimensions of evaluation: self worth, need for achievement, need for approval, need for comfort, need for righteousness, and global assessment of others. A Cronbach alpha reliability analysis revealed a reliability coefficient of .490 on rationality, .669 on irrationality, .577 on self worth, .700 on need for achievement, .594 on need for approval, .537 on need for comfort, .720 on need for righteousness and .533 on global assessment of others.

▪ *Depression and Anxiety Scale 21 (DASS 21)* containing 21 items to measure students' depression, anxiety and stress levels. The reliability analysis utilizing Cronbach's alpha indicated a reliability value of .822 on depression, .680 on anxiety and .766 on stress.

▪ *Attitudes towards school (ATS)*, including 9 items, was utilized to assess students' affect items, behavioral intention items, and cognition items using a five-point Likert scale. The reliability analysis utilizing Cronbach's alpha indicated a reliability value of .171 for affect items, .670 behavioral intention items and .565 for cognition items.

▪ *The Learning Motivation (LM)* scale has 21 questions designed to evaluate students' levels of learning motivation in order to assess extrinsic motivation, introjected regulation, motivation identified regulation, motivation intrinsic regulation. This scale utilized a five-point Likert format. Reliability analysis using Cronbach alpha showed .710 on extrinsic motivation, .630 on motivation introjected regulation, .572 motivation identified regulation and .541 on motivation intrinsic regulation.

### 3.3. Privacy and Withdrawal

In order to maintain the confidentiality of the responses, a unique code was used. This code includes the initials of the first and last name, along with the day and month of birth. The identification code was used to securely associate the pretest with the post-test assessment, in order to ensure the confidentiality of the participants, and consistency in evaluating the results. Participants may revoke consent and terminate participation at any moment without incurring any adverse repercussions.

### 3.4. Intervention program

This research implemented a Rational Emotional Behavioral Therapy group intervention in two Reșita high schools in Caraș-Severin county. The programs outlined by Ellis et al. (1997; 2006) were adapted to consist of four sessions, each lasting 50 minutes, for Romanian participants. This research investigates the REBT intervention, which seeks to assist participants in comprehending and regulating irrational beliefs and negative emotions that may contribute to psychiatric distress. This study included four group sessions, each lasting 50 minutes, for the intervention.

#### 3.4.1. Session 1

Session topic: Group Initiation and Fundamentals of REBT

Session Description: Introduction to the program, using the lecture in order to clarify the principles of Rational Emotive Behavior Therapy as well as its operational mechanisms, a cognitive-behavioral methodology aimed at enhancing self-concept and self-esteem.

Objectives of the session:

- Creating a safe space for participants to form a group;
- Introducing participants to the fundamental concepts of REBT;
- Introducing the participants to the notions of self-esteem from a cognitive-behavioral point of view;
- Improving self-esteem.

#### 3.4.2. Session 2

Session topic: Deconstructing the ABCs of Emotion. A brief analysis

Session Description: The second session focused on the distinction between rational and irrational beliefs. Students were employed in circumstantial recognition for an activating event (A), irrational (B), and emotional and behavioral consequences (C). Students must complete at least one given ABC worksheet.

Objectives of the session:

- Familiarizing students with primary and complex emotions at a theoretical level;
- Exploring their own irrational beliefs starting from an activating event relevant to them;
- Diminishing at least one irrational belief.

### 3.4.3. Session 3

Session topic: Anxiety, Academic Expectations, and Coping with Irrational Thoughts: Navigating the World of Students

Session description: In the third session, irrational thoughts were emphasized, but also academic expectations and their connection with anxiety. A cognitive/behavioral approach to anxiety reduction and functional coping strategies in anxious situations.

Objectives of the session:

- Familiarizing students with anxiety at a theoretical level;
- Exploring the irrational thoughts-school attitudes-anxiety link;
- Exploring coping strategies that can be used by students.

### 3.4.4. Session 4

Session topic: Empowering Change: Mastering Problem Solving and Challenging Irrational Beliefs

Session Description: During the fourth session, we discussed exposure to in vivo home tasks and continued to practice using REBT concepts. At the end of each session, new in vivo exposure activities were created for students, and these exercises were based on individuals' unique hierarchies.

Objectives of the session:

Familiarizing students with problem-solving strategies;

- Diminishing at least one irrational belief;
- Summary of the 4 sessions;

Asking for a framework that gives students finality about the program.

## 4. Results

Table 1 presents the mean, minimum, maximum, standard deviation, and the difference between the

Table 1  
Descriptive statistics and mixed ANOVA results for Gabs

| Variable    | Moment    | Group | Descriptive statistics |     |     |       | Mixed ANOVA results |                 |      |     |
|-------------|-----------|-------|------------------------|-----|-----|-------|---------------------|-----------------|------|-----|
|             |           |       | N                      | Min | Max | m     | SD                  | Effect          | F    | p   |
| Rationality | Pre-Test  | Int   | 31                     | 6   | 20  | 15.29 | 3.17                | Moment (within) | .86  | .36 |
|             |           | Ctrl  | 19                     | 9   | 19  | 14.74 | 2.66                | Moment*Group    | .54  | .47 |
|             | Post-test | Int   | 31                     | 8   | 20  | 15.19 | 2.90                | Group (between) | 3.64 | .06 |
|             |           | Ctrl  | 19                     | 8   | 19  | 13.89 | 3.01                |                 |      |     |
|             | Pre-Test  | Int   | 31                     | 40  | 101 | 65.71 | 14.65               | Moment (within) | 2.10 | .15 |

control and intervention groups in the pre-test and post-test of The General Attitudes and Beliefs Scale.

Table 1 demonstrates a significant decrease on the Global Assessment of Others scale, from pre-test to post-test (*moment: F(2,48)=6.01, p=.02, p<.05, group: F(2,48)=.02, p=.89*). However, the decrease is present only in the intervention group with pre-test scores of 9.23 and post-test scores of 7.94, whereas the control group showed no substantial change, with pre-test scores of 8.95 and post-test scores of 8.37.

We also found a marginal effect of the intervention on the Need for Righteousness (*moment:(2,48)=2.83, p=.10, group: F(2,48)=3.64, p=.06*), with the intervention group scoring lower levels as compared with the control group. The two groups were more similar in the pre-test (intervention group mean = 12.87, control group mean = 13.95), as compared with the post-test (intervention group mean = 11.65, control group mean = 13.68).

Table 2 shows a significant difference on Anxiety between the intervention group and control group (*F(2,48) = 6.42, p = .02, p< .05*), with the intervention group scoring higher levels (intervention group mean = 10.37) compared with the control group (control group mean = 6.71) in the pre-test.

Table 3 displays the mean, minimum, maximum, standard deviation, and the difference between the control and intervention groups in the pre-test and post-test of Attitudes towards school. Table 3 indicated that no significant differences were observed between the control and intervention groups across any variable.

Table 4 displays the mean, minimum, maximum, standard deviation, and the difference between the control and intervention groups in the pre-test and post-test of The Learning Motivation. Table 4 demonstrated that no significant differences were detected between the control and intervention groups for any variable.

|                             |           |      |    |     |       |       |              |                 |      |     |
|-----------------------------|-----------|------|----|-----|-------|-------|--------------|-----------------|------|-----|
| Irrationality               | Ctrl      | 19   | 39 | 91  | 70.32 | 13.63 | Moment*Group | .66             | .42  |     |
|                             | Post-test | Int  | 31 | 32  | 95    | 60.84 | 14.68        | Group (between) | 3.03 | .09 |
|                             | Ctrl      | 19   | 45 | 104 | 68.95 | 15.02 |              |                 |      |     |
| Self worth                  | Pre-Test  | Int  | 31 | 4   | 16    | 9.90  | 3.11         | Moment (within) | 2.71 | .11 |
|                             |           | Ctrl | 19 | 4   | 17    | 11.26 | 4.05         | Moment*Group    | .19  | .67 |
|                             | Post-test | Int  | 31 | 4   | 18    | 9.26  | 2.72         | Group (between) | 1.99 | .17 |
|                             | Ctrl      | 19   | 4  | 20  | 10.16 | 3.64  |              |                 |      |     |
| Global assessment of others | Pre-Test  | Int  | 31 | 6   | 15    | 9.23  | 2.06         | Moment (within) | 6.01 | .02 |
|                             |           | Ctrl | 19 | 3   | 13    | 8.95  | 2.85         | Moment*Group    | .87  | .36 |
|                             | Post-test | Int  | 31 | 3   | 14    | 7.94  | 2.22         | Group (between) | .02  | .89 |
|                             | Ctrl      | 19   | 4  | 12  | 8.37  | 2.36  |              |                 |      |     |
| Need for righteousness      | Pre-Test  | Int  | 31 | 7   | 20    | 12.87 | 3.20         | Moment (within) | 2.83 | .10 |
|                             |           | Ctrl | 19 | 9   | 19    | 13.95 | 2.71         | Moment*Group    | 1.18 | .28 |
|                             | Post-test | Int  | 31 | 6   | 20    | 11.65 | 3.18         | Group (between) | 3.64 | .06 |
|                             | Ctrl      | 19   | 6  | 20  | 13.68 | 3.57  |              |                 |      |     |
| Need for comfort            | Pre-Test  | Int  | 31 | 5   | 20    | 11.84 | 3.42         | Moment (within) | .02  | .90 |
|                             |           | Ctrl | 19 | 5   | 15    | 12.32 | 2.56         | Moment*Group    | 1,53 | .22 |
|                             | Post-test | Int  | 31 | 5   | 19    | 11.13 | 3.19         | Group (between) | 2.17 | .15 |
|                             | Ctrl      | 19   | 4  | 19  | 12.89 | 3.23  |              |                 |      |     |
| Need for approval           | Pre-Test  | Int  | 31 | 3   | 15    | 8.29  | 2.59         | Moment (within) | .14  | .72 |
|                             |           | Ctrl | 19 | 3   | 14    | 9.63  | 2.58         | Moment*Group    | .35  | .56 |
|                             | Post-test | Int  | 31 | 3   | 14    | 8.39  | 2.71         | Group (between) | 2.58 | .12 |
|                             | Ctrl      | 19   | 3  | 15  | 9.21  | 3.24  |              |                 |      |     |
| Need for achievement        | Pre-Test  | Int  | 31 | 7   | 20    | 13.58 | 3.53         | Moment (within) | .513 | .48 |
|                             |           | Ctrl | 19 | 9   | 20    | 14.21 | 3.32         | Moment*Group    | 2.59 | .11 |
|                             | Post-test | Int  | 31 | 6   | 19    | 12.48 | 3.35         | Group (between) | 5.60 | .11 |
|                             | Ctrl      | 19   | 8  | 20  | 14.63 | 3.14  |              |                 |      |     |

**Table 2**

*Descriptive statistics and mixed ANOVA results for Das21*

| Variable   | Moment    | Group | Descriptive statistics |     |     |       |       | Mixed ANOVA results |      |      |
|------------|-----------|-------|------------------------|-----|-----|-------|-------|---------------------|------|------|
|            |           |       | N                      | Min | Max | m     | SD    | Effect              | F    | p    |
| Anxiety    | Pre-Test  | Int   | 19                     | 5   | 19  | 10.37 | 4.806 | Moment (within)     | 0.52 | 0.48 |
|            |           | Ctrl  | 31                     | 0   | 14  | 6.71  | 5.013 | Moment*Group        | 1.32 | 0.26 |
|            | Post-test | Int   | 19                     | 1   | 19  | 9.11  | 4.806 | Group (between)     | 6.42 | 0.02 |
|            |           | Ctrl  | 31                     | 1   | 21  | 7.00  | 5.013 |                     |      |      |
| Depression | Pre-Test  | Int   | 19                     | 1   | 17  | 9.95  | 3.961 | Moment (within)     | 0.14 | 0.71 |
|            |           | Ctrl  | 31                     | 1   | 19  | 7.19  | 4.197 | Moment*Group        | 0.35 | 0.56 |
|            | Post-test | Int   | 19                     | 1   | 19  | 9.37  | 5.356 | Group (between)     | 0.14 | 0.71 |
|            |           | Ctrl  | 31                     | 0   | 20  | 7.32  | 5.363 |                     |      |      |
| Stress     | Pre-Test  | Int   | 19                     | 3   | 20  | 12.26 | 4.994 | Moment (within)     | 0.45 | 0.50 |
|            |           | Ctrl  | 31                     | 1   | 19  | 8.55  | 5.089 | Moment*Group        | 3.21 | 0.08 |

|           |      |    |   |    |       |       |                 |      |      |
|-----------|------|----|---|----|-------|-------|-----------------|------|------|
| Post-test | Int  | 19 | 2 | 21 | 10.84 | 4.705 | Group (between) | 3.21 | 0.08 |
|           | Ctrl | 31 | 1 | 19 | 9.19  | 4.549 |                 |      |      |

**Table 3**  
Descriptive statistics and mixed ANOVA results for attitudes towards school

| Variable  | Descriptive statistics |       |    |     |     |       |      | Mixed ANOVA results |      |     |
|-----------|------------------------|-------|----|-----|-----|-------|------|---------------------|------|-----|
|           | Moment                 | Group | N  | Min | Max | m     | SD   | Effect              | F    | p   |
| Cognition | Pre-Test               | Int   | 19 | 4   | 10  | 6.47  | 1.54 | Moment (within)     | 2.47 | .12 |
|           |                        | Ctrl  | 31 | 4   | 9   | 6.16  | 1.46 | Moment*Group        | .90  | .39 |
|           | Post-test              | Int   | 19 | 5   | 9   | 6.32  | 1.20 | Group (between)     | .76  | .39 |
|           |                        | Ctrl  | 31 | 3   | 8   | 5.61  | 1.30 |                     |      |     |
| Behavior  | Pre-Test               | Int   | 19 | 6   | 12  | 9.79  | 1.68 | Moment (within)     | .82  | .37 |
|           |                        | Ctrl  | 31 | 6   | 13  | 9.48  | 1.56 | Moment*Group        | .23  | .63 |
|           | Post-test              | Int   | 19 | 7   | 13  | 10.11 | 1.48 | Group (between)     | 1.12 | .30 |
|           |                        | Ctrl  | 31 | 7   | 14  | 9.58  | 1.50 |                     |      |     |
| Affect    | Pre-Test               | Int   | 19 | 11  | 15  | 13.16 | 1.25 | Moment (within)     | 3.09 | .09 |
|           |                        | Ctrl  | 31 | 8   | 19  | 12.55 | 2.37 | Moment*Group        | .14  | .72 |
|           | Post-test              | Int   | 19 | 5   | 18  | 12.32 | 2.70 | Group (between)     | .14  | .71 |
|           |                        | Ctrl  | 31 | 9   | 15  | 12.00 | 1.36 |                     |      |     |

**Table 4**  
Descriptive statistics and mixed ANOVA results for Motivational learning

| Variable               | Descriptive statistics |       |    |     |     |       |      | Mixed ANOVA results |      |     |
|------------------------|------------------------|-------|----|-----|-----|-------|------|---------------------|------|-----|
|                        | Moment                 | Group | N  | Min | Max | m     | SD   | Effect              | F    | p   |
| Introjected motivation | Pre-Test               | Int   | 31 | 9   | 30  | 21.90 | 5.83 | Moment (within)     | .10  | .76 |
|                        |                        | Ctrl  | 19 | 9   | 30  | 22.79 | 5.24 | Moment*Group        | .13  | .73 |
|                        | Post-test              | Int   | 31 | 13  | 30  | 21.97 | 4.65 | Group (between)     | 1.86 | .19 |
|                        |                        | Ctrl  | 19 | 9   | 30  | 22.00 | 5.78 |                     |      |     |
| Intrinsic motivation   | Pre-Test               | Int   | 31 | 7   | 25  | 16.03 | 4.60 | Moment (within)     | .20  | .66 |
|                        |                        | Ctrl  | 19 | 11  | 20  | 16.47 | 3.16 | Moment*Group        | .28  | .60 |
|                        | Post-test              | Int   | 31 | 10  | 24  | 16.06 | 3.44 | Group (between)     | .12  | .73 |
|                        |                        | Ctrl  | 19 | 6   | 20  | 15.11 | 4.33 |                     |      |     |
| Identified motivation  | Pre-Test               | Int   | 31 | 10  | 25  | 18.81 | 4.18 | Moment (within)     | .04  | .84 |
|                        |                        | Ctrl  | 19 | 8   | 24  | 19.00 | 3.81 | Moment*Group        | .01  | .91 |
|                        | Post-test              | Int   | 31 | 11  | 25  | 18.74 | 4.12 | Group (between)     | .07  | .79 |
|                        |                        | Ctrl  | 19 | 7   | 25  | 18.79 | 4.61 |                     |      |     |
| Extrinsic motivation   | Pre-Test               | Int   | 31 | 5   | 25  | 14.84 | 5.65 | Moment (within)     | 1.08 | .30 |
|                        |                        | Ctrl  | 19 | 5   | 24  | 16.47 | 6.30 | Moment*Group        | 1.19 | .29 |
|                        | Post-test              | Int   | 31 | 5   | 25  | 14.81 | 4.75 | Group (between)     | .07  | .79 |
|                        |                        | Ctrl  | 19 | 5   | 25  | 17.00 | 6.25 |                     |      |     |

## 5. Discussions

The aim of this research was to examine the impact of Rational Emotive Behaviour Therapy (REBT) on irrationality, general attitudes and beliefs, learning motivation and attitudes towards school among Romanian high school students using a four-session intervention program based on REBT principles, targeting 10th-grade students in two Romanian high schools. The findings indicated that the REBT intervention had marginal effects on certain irrational attitudes and beliefs, such as the need for righteousness and global assessments of others, with no effect on learning motivation or attitudes towards school.

We found that only 2 out of 6 irrational scales (i.e., Global Assessment of Others, and Need for Righteousness) changed following the REBT intervention. We will discuss each result separately. The global evaluation of others describes the way individuals generally evaluate and judge others (David et al., 2010). The global assessment of others among teens is shaped by peer comparisons, cultural expectations, and the broadening of social networks, resulting in detrimental self-evaluations and harmful interactions. High school pupils are often influenced by their peers and society norms. During early adolescence, young individuals encounter diverse peer associations—both good and negative—as they generally expand their social circles (Brighton, 2007). Unconditional acceptance/ assessment of Others serves as the rational counterpart to self-acceptance, acknowledging that individuals' fallibility and imperfections must be embraced (David et al., 2010). The results regarding the decrease of global assessment of others are consistent with results reported by Cristea et. al (2008). REBT assists adolescents in diminishing their Global Assessment of Others by confronting irrational beliefs, promoting emotional control, boosting self-esteem, and cultivating empathy, resulting in a reduction of Global Assessment of Others post-interventions. This may affect their evaluation of peers and their ethical judgments (Nawa et. al. 2024).

The need for righteousness details one's need to perceive the self and others as moral and virtuous (Davies, 2008). When they reach the highschool age, teenagers begin to grow morally, internalizing societal norms and developing a sense of appreciation for justice and fairness. (Kohlberg, 1973). This phase aids students in comprehending the significance of these values in preserving societal order (Kohlberg, 1958). Teenagers cultivate abstract reasoning, allowing them

to comprehend fairness in interpersonal interactions and societal contexts (Murray, et. al., 1979). REBT promotes self-reflection, augmenting students' self-awareness and comprehension of their values, particularly the significance of fairness in their relationships. Cognitive and emotional transformations heighten awareness of equality and intensify the need for justice when students use these ideas in their everyday endeavors. The decrease of the need for rightness among students after a REBT program can be attributed to the cognitive and emotional restructuring enabled by the REBT approach. The program used in this study, particularly in sessions 3 and 4, assisted students in identifying and challenging irrational beliefs, resulting in generating improved rational thought and emotional regulation. Through the reorganization of their ideas and emotions, students cultivate a more equitable viewpoint, diminishing the stringent insistence on justice and righteousness.

The minor improvement of the intervention on rationality or irrationality did not have a significant effect on attitudes towards school nor on learning motivation. Attitudes towards school and learning motivation in students are influenced by factors like family environment, relationships, personal interests, and intrinsic motivations. Although these attitudes are generally independent of rationality or irrationality, and can be shaped by past experiences and perceptions (Al-Hassan et. al, 2024), the current study findings suggest that behavioral attitude, identified regulation, and intrinsic regulation are not correlated with rationality or irrationality, since they evaluate different characteristics of human behavior and cognition. Introjected motivation, influenced by internal factors like guilt or worry, showed a significant correlation with both rationality and irrationality. This indicates that internal influences may affect both rational and irrational ideas. Affective items, behavioral purpose items, cognitive items, and extrinsic motivation have significant correlation with irrationality, indicating the influence of emotional disturbances and external influences. Despite these correlations and expected effects, the research indicates no significant changes in control group in the control group across any subscales of learning motivations (affective items, behavioral intention items, and cognitive items) or attitudes towards school (extrinsic motivation, introjected regulation, identified regulation, intrinsic regulation) following to the REBT session.

The absence of significant changes following the intervention may be attributed to the sensitivity of the measures or the length of the intervention. These

results are consistent with results found by Kachman (1990). Kachman (1990) suggested that, in order to improve the external validity of this study, it is recommended that the experiment be conducted with a sample from a public school system. Also the efficacy of the intervention with subjects from lower socioeconomic backgrounds and with a broader spectrum of intellectual and attainment levels would be supported by a study that utilized more representative samples (Kachmann, 1990). In our study, despite the intervention being implemented inside a public school system, the participants came from an upper-middle class background. Thus while the study does indeed take the public school system side of Kachman's suggestion, it fails to reach his suggested socio-economic class of desired participants.

Furthermore, attitudes towards school or learning motivation for minor improvements did not have a significant effect. This may occur because 10th-grade students are not subjected to final examinations, or due to the fact that the two high schools involved in the present research are the most prestigious in the region.

## 6. Conclusions

In conclusion, while the groups initially exhibited similarities, the interventions implemented have led to varying outcomes. This suggests a potential necessity for more tailored and individualized strategies within treatment programs. Subsequent research has the potential to elucidate these disparities and enhance the effectiveness of interventions tailored to each demographic.

### 6.1. Future Directions

Implementing longitudinal research may yield a more profound comprehension of the evolution of these factors and their interactions across time. This would aid in evaluating the sustained efficacy of the program.

Subsequent study may examine additional variables that could affect the outcomes such as generalized anxiety, school motivation or self concept. Incorporating a wider array of components may yield a more thorough comprehension of the underlying dynamics.

### 6.2. Limits

The present study contains several limitations that might be changed to enhance further research:

- **Sample Size:** Despite the random assignment of students to control and experimental groups, the overall numbers in both groups were not substantial. When sample sizes are minimal, there is insufficient power to identify a difference.

- **Emotions of the student in the sample:** The sampling process may have encountered an issue, as the experimental group had a substantially higher level of anxiousness compared to the control group.

- **The submission of responses:** Due to the code employed to protect participant confidentiality, certain assessments could not be included since the student did not submit the identical code.

- **Profile of the high school:** Both institutions are situated in urban locales and serve academically proficient students with strong educational backgrounds.

- **Program length:** The four sessions, each lasting 50 minutes, may not have been adequate to provide a significant effect.

- **Short-Term Analysis:** The study's emphasis on short-term effects may neglect long-term consequences. Longitudinal studies are essential to evaluate the enduring impact of the intervention across time.

- **External Factors:** Unregulated external variables may have impacted the outcomes. Subsequent study should endeavor to regulate these variables to more precisely isolate the intervention's effects.

By overcoming these constraints and adhering to the proposed future directions, researchers might enhance the existing findings to create more effective and focused therapies, ultimately resulting in improved outcomes for the populations under study. The current results of this indicate that REBT interventions are efficient on general beliefs and attitudes.

## Authors note:

**Ana-Maria Eugenia Jura** (Ph. D. Student) has developed a sustained academic and practical interest in the intersection of education, psychology, and personal development. Her work explores how educational practices can be optimized through integrative counseling approaches, with a particular focus on the role of self-esteem in adolescent development and the shaping of personality during childhood. She has investigated the cognitive and psychological dimensions of transdisciplinary frameworks, especially as they apply to both educational and therapeutic contexts. More recently, she has contributed to innovative approaches in vocational education and staff development, with attention to enhancing employability among vulnerable populations. Throughout, her work reflects

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**Laurențiu Maricuțoiu** (Ph.D.) is Professor at the West University of Timișoara. In his studies, Professor Maricuțoiu investigated self-regulation mechanisms in the general population and in the education system. He focused on how these self-regulation mechanisms are relevant for one's self-worth and psychological well-being. Following some early meta-analyses on interventions on employee burnout or on employee engagement, he focused his studies on how both students' and teachers' well-being develops and evolves in the classroom. He published longitudinal studies on the mechanisms of students' well-being, in which he analyzed how performance feedback impacts students' well-being, how students adapt to negative performance feedback, or how students' well-being is predicted by within-student fluctuations of self-efficacy.

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