# The Structural Relationship between Academic Self-efficacy and Stress Due to Academic Expectations Mediated by Difficulty in Emotion Regulations in Junior High-school Students

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| Article Info | ABSTRACT |
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| **Article Type**: <br> Research Article <br><br><br> **Article History:** <br> Received August 13, 2023 <br> Received in revised form October 02, 2023 <br> Accepted November 17, 2023 <br> Published Onlin November 20, 2023 <br><br><br><br> **Keywords:** <br> Educational expectation, <br> Educational self-efficacy, <br> Emotion regulation, <br> Stress, <br> Students | Educational self-efficacy and its relationship with learners' different psychological traits can have a tremendous effect on the success or failure of the students. Thus, the present research sought to investigate whether academic self-efficacy has an effect on the students' stress derived from the education expectations based on such mediating factor as the difficulty of emotion regulation. The research method was descriptive-correlational based on structural equations. The statistical population consisted of all 800 junior female high-school students, 9th grade, from 16 State schools in the third district of Tehran. To decide on the sample size according to the number of observed variables, assigning a coefficient of 25 for each (7 variables in the model), and taking the possibility of incomplete questionnaires into account, 200 people were chosen by cluster sampling method. The data were gathered using three questionnaires: self-efficacy (Jinks & Morgan, 1999), difficulty in emotion regulation (Gross & John, 2003), and educational expectation (Ang & Huan, 2006). Using the structural equation modelling, the data analysis revealed that educational self-efficacy and difficulty in emotion regulation had a direct and significant effect on the stress caused by educational expectations. Also, an indirect effect of educational self-efficacy with the mediation of difficulty in emotion regulation was captured and the research model was revealed to predict 63% of the stress variable due to educational expectations. The study revealed the importance of cognitive factors in explaining the stress caused by academic expectations. |

## Introduction

It is essential to most cultures to have educational activities on the first wing and also to be very successful in those efforts on the other, and among many factors related to the two mentioned goals, the experienced stress is the one which is mostly under the scope of interest (Tan & Yates, 2011). The word **stress** has got different meanings by physicists, linguists, or psychologists; however, educational experts define 'stress' as a kind of psychological pressure experienced by a school student, a university student, or any other learner who is supposed to be assessed at the end of any course design (Nathaniel et al., 2016). Such a kind of stress which is, in particular, common among the students is called educational stress. The survey of educational stress revealed that 67% of learners consider the educational stress as the biggest pressure in their lives (Hunter et al., 2018). Nevertheless, the stress caused by educational expectations, of which a small amount is necessary for the success of the students, if its severity continues more and longer than required, causes lots of difficulties for the learners' mental health and their well-being (Yuan et al., 2018). Hence, this paper tends to find out its effects through structural equation modelling.

The great need of knowledge on one side and the individual perception of having no time and not enough facilities on the other to reach the appropriate knowledge, or doing assignments based on educational expectation from the teachers and parents, or even the learners themselves is called the stress due to educational expectation (Gadzella & Baloglu, 2001). In teaching area, stress caused by educational expectation is one of the most important factors in the process of students' learning (Freire et al., 2019). The optimal stress gained from educational expectancy can be considered an influential factor in learners' educational achievements (Alrashidi et al., 2019). Ang et al. (2007) believed the pressure related to teaching is the most important source of stress which the learners face with. Many studies convey a connection between a high level of academic expectancy and the stress received by the students (Ang & Huan, 2006). Academic stress occur due to many demands made on the students or learners in the form of examinations, competing with peers, meeting the academic desires of teachers and parents as well as their own academic expectations (Ahhie & Ohanaka, 2019). In the domain of stress due to educational expectations, the five stressors are emphasized which are failures, conflicts, pressures, changes, self-imposed stress on one hand; and their four-sided reactions such as physiological, behavioral,

cognitive, and emotional on the other (Pasebani et al., 2015).

Freire et al. (2019) in definition of stress caused by educational expectations referred to the kind of non-harmonic experiences between situational claims and interpersonal sources. The evidence has shown that educational problems are considered as the most common stress resources (Ying et al., 2018). Having high educational expectations is considered as an important factor which influences the educational proficiency either directly or indirectly. There is a positive relationship between expectation for academic achievement and the achievement itself (Hannan & Orcutt, 2020). However, if the expectation is too much high, it can have such negative result as excessive stress leading to psychological problems (Ngui & Lay, 2020). The stress caused by educational expectation, in turn, is connected with such variables as emotion regulation (Harley et al., 2019).

The difficulty of self-emotion regulation is defined as the starting process, maintenance, modification, and (or) changing in appearance, severity, or the continuation of inner feeling (Etesami-e Nasv et al., 2018), and the emotion related to socio-psychological and physical process in accomplishing the individual's aims (Vimz & Pina, 2010). It is a kind of mechanism by which people change (either consciously or unconsciously) their emotion to reach the stated outcome (Aldao et al., 2010). According to Zhao (2017), self-emotion regulation means regulating emotion experience by one's behavioral management (Fayazi-e Boroojeni, 2018). The cognitive and emotional factors such as self-emotional regulation can lead to behavioral problems if it works inappropriately (Fujisato et al., 2020), which of course, in the vast part is due to the hardship of the assignments for emotional regulation. Since the definition of difficulty in self-regulation emotion includes the difficulty of behavior management as well as experiencing the emotion, it is crystal clear that self-regulation emotion does not involve just the affective process, but also involves the cognitive process (King et al., 2017).

In the domain of cognitive processing, Zelazo and Cunningham (2007) introduced a model in which the emotion is one aspect of cognitive motivation to solve the goal-oriented problems. In this model, the self-regulation emotion has been introduced within whose first and second structure, at least partly, it is connected to the performance functioning of the brain (Turka & Accella, 2017). The findings of neuro-cognitive development also confirmed that the emotion regulation and performing function are related to each other indirectly and elaborate in analyzing the information and performing the activities (Dávila-Acedo & Borrachero,

2016). Emotion regulation includes creating thoughts and behaviors which informs people to know what kind of emotion they have and when they have it (Tatnell et al., 2017). Emotion regulation is the intrinsic aspect of emotion responses which, in fact, are some actions used to change or modify an emotional state and are so effective in making people capable in different circumstances (Mohammadi, 2014).

On the other hand, one's most problems in behavior and also not having good functions at different levels in professional activities, educational, artistic, sports, and the good social, emotional, and humanistic relationships are thought to be related to self-efficacy. The people with low self-efficacy do not have the required control over their life events, and the people who have much less self-efficacy than the first group do not even try to overcome their problems because they are convinced that whatever they do, the result is the same and their effort is useless (Lent et al., 2019). The concept of self-efficacy was driven from socio-cognitive hypothesis, as the cognitive and emotional processes play a vital role in forming self-efficacy by humans (Raskauskas et al., 2015). Self-efficacy is one's belief about his abilities to be successful in a particular state. Based on Bandura (1994), this belief is a good determination on how people think, feel, and behave. Studies show that there is a direct and significant relationship between educational self-efficacy and different variables including educational proficiency (Van Raalte & Posteher, 2019), the influential learning approaches, regulation difficulties, compatibility and success at school, convincing instructional styles, asking help from others related to education (Jakesova et al., 2015), educational motivation (Saracaloglu & Dincer, 2009), educational success (Jamali et al., 1392; Tahmasbian & Anari, 1391), the habit of effective studies and control source (Mohammed et al., 2014), the aim of improvement (Davari et al., 2012), and the belief in high intelligence (Poorbagheban et al., 2013).

Bandura believed that self-efficacy is one of the most important factors in developing the safe social relationships which makes one's life sweet and also forces him/her to resist all the life-long pressure (Henderson et al., 2018). The young who evaluate their social relationships effective and positive, never feel unable, but have better adjustment with painful outcome (whether physical or psychological), and have less problems in social interaction either with family members or other people (Samani et al., 2013). We can also refer to self-efficacy as an influential fact against students' educational stress (Qasemi & Poor-razavi, 2017). Educational self-efficacy is one dimension of general efficacy whose meaning is the students' belief in their capabilities to understand or to do their scientific

tasks in order to reach their potential in any specific educational areas (Altunsoy et al., 2010; Fetsco & McClure, 2005). Elias (2008) believed that self-efficacy is a student's trust and creative thinking of his/her capabilities to challenge their scientific tasks. Since the educational self-efficacy is called the perceived capacity of being connected with peers and managing different kinds of interpersonal conflicts, the young who benefit more self-efficacy, are more successful in social relationships (Takano & Reason, 2017). Self-efficacy can be effective on the emotional resistance and also emotion regulation level under different and hard circumstances (Mahmudpoor et al., 2018).

The literature review shows the relationship between this research variables: self-efficacy, stress, and emotion regulation. Khojasteh and Montazeri (2018) concluded that there is a significant negative relationship between self-efficacy and educational stress. Dudangeh and Ghamari (2019) also reported that there is a meaningful relationship between emotion regulation and educational stress. Yin et al. (2020) showed that there is a two-way relationship between the perceived stress and self-efficacy which can justify part of the students' success or failure. Hannan and Orcutt (2020) concluded that there is a significant connection between emotion regulation and stress signs among the students studying in BA degree. In the same way, Mirzaeefar et al. (2020) showed that the prediction of educational achievement by university students based on educational emotion, educational stress, and perceived behavioral control was significant.

Since stress has become part of students' academic life due to various internal and external expectations placed upon their shoulders (Reddy et al., 2018), there remains no choice on the learners' side unless to modify it as a benefit rather than a threat. Among different solutions to have a successful modification in stress reduction, working on the students' self-efficacy on one hand (Khan, 2023), and having them regulate their emotions on the other seems can be effective to carry the burden manageably. Consequently, lack of comprehensive research in the area (especially in Iran), and the evidence of experiencing stress caused by academic expectations, and studying the role of educational self-efficacy, the difficulty of emotion regulation, were the major motivation of doing this research. It was done both to end this lack and to unveil the care and attention to the importance of stress due to academic expectations. Based on whatever has been discussed so far, the aim of doing this research was to determine the effect of self-efficacy on the stress generated by educational expectations with the mediation of emotion regulation difficulties among the

junior-high school students through answering the following question:

- Does educational self-efficacy affect the stress caused by academic expectancy mediated by the difficulties in emotion regulation among junior high school students?

## Method

### Design

Based on the aim of the study, the present research was an applied one, and based on the data gathering method, it is descriptive correlational based on the structural equations.

### Participants

The statistical population consisted of all the 800 female students from 16 state schools, district three in Tehran, ninth grade junior-high school from which 200 students were selected in the academic years of 2020-2021 using multi stage clustering sampling. This sample was chosen based on the number of observed variables in the model (7 in the model) and devoting 25 for each, plus the probability of incomplete questionnaires. The entrance criteria were female students living in Tehran, not being ill and not having any physical problems, having a consent letter from their parents, and being interested in the study while the excluding criteria were incomplete questionnaires and also the outliner ones.

### Instruments

**Academic Self-Efficacy Questionnaire of Jinks and Morgan (1999)**
This questionnaire was designed by Jinks and Morgan (1999) having 30 questions and three sub-criteria including aptitude (1-10), effort (11-20), and context (21-30). Each question is given mark based on four dimensions of Likert scale: 4 (absolutely agree), 3 (somehow agree), 2 (somehow disagree), 1 (absolutely disagree). Questions number 4, 5, 15, 16, 19, 20, 22, and 23 must be answered conversely. The lowest and the highest mark ranges from 30 to 120. The high mark is a sign of high self-efficacy and the law mark stands on the opposite. The test maker reported the internal consistency of .82 using Cronbach's alpha. Also, the Cronbach's alpha coefficients for three sub-criteria of aptitude, effort, and context were reported .78, .66, and .70 respectively (Jamali et al., 2013). In Iran, Jamali et al. used Cronbach's alpha to estimate the reliability which was .76 for self-efficacy, and for the three sub-criteria were .79 for aptitude, .62 for effort, and .59 for context.

**Difficulty in Emotion Regulation Questionnaire of Gross and John (2003)**
It consisted of 10 general questions which has two sub-criteria for the second time evaluation (six questions of 1, 3, 5, 7, 8, 10) and cooling down (4 questions of 2, 4, 6, 9). The answers are rated based on Likert's 7 grade scaling from absolutely disagree (1 point) to absolutely agree (7 point), and finally were scored based on the two young groups of normal and abnormal. The lowest mark is 7 and the highest mark is 70 in which the high mark indicated the difficulty in emotion regulation and bad status. The Cronbach's alpha for re-evaluation was .79 and for cooling down was .73, and for the reliability via test-retest method after 3 months was reported to be .69 for the total scale. The Persian edition of Gross and John's emotion regulation questionnaire was normalized by Qasempoor et al. (2012). In this research, the reliability based on internal consistency formula was reported to be .60 and .81 using the Cronbach's alpha. Using the analysis of the main items by Varimax circulation, the questionnaire validity and the criterion validity was acceptable and the correlation between the two sub-scale was $(r = .13)$.

**The Stress of Educational Expectation Questionnaire by Ang and Huan (2006)**
This questionnaire was prepared by Ang and Huan to evaluate the stress sources of the young's in education. There are nine questions and two sub-scales in this questionnaire from which the first scale (including five questions of 4, 5, 6, 7, 9) is related to parents'/teachers' expectations; and the second scale is related to self-expectations which is evaluated by 4 questions of 1, 2, 3, and 7. It was scored using Likert's scale of five digits as 1 point for 'never'; 2 points for 'rarely'; 3 points for 'sometimes'; 4 points for 'often'; and 5 points for 'always'. The marks range from 9 to 45 in which the high mark means the higher stress and vice versa. The construct and content validity was endorsed by the test makers and its reliability was estimated to be .90 through internal consistency formula.

### Procedure

After selecting the representative sample from the statistical population, a thorough study of all the questionnaires was done and the official certificates were taken from both the university and education administration centers to do the research in the academic year of 2020-2021. The study coincided with the corona virus pandemic; thus, the researcher distributed the questionnaires among the students online. The questionnaires were filled and sent back to the researcher. After this step, the raw data were gathered, and using structural equation modelling in SPSS 18 and

Amos 23 software, they were analyzed to study the research hypotheses.

## Findings

After confirming the normality of the data using Kolmogorov-Smirnov test, the model fit of estimating the three variables was also investigated.

**Table 1**

*The Correlation Matrix between Self-Efficacy and the Difficulty in Emotion Regulation with the Stress of Educational Expectation*

| Variable | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aptitude | 26.68 | 2.88 | 1 | | | | | | | | |
| Effort | 19.02 | 3.64 | .45** | 1 | | | | | | | |
| Context | 19.35 | 2.78 | .81** | .86** | 1 | | | | | | |
| Educational Self/Efficacy | 65.04 | 8.34 | .79** | .85** | .96** | 1 | | | | | |
| Reevaluation | 19.55 | 3.90 | -.40** | -.39** | -.46** | -.45** | 1 | | | | |
| Cool Down | 13.68 | 2.02 | -.31** | -.32** | -.37** | -.36** | -.87** | 1 | | | |
| Diff. Of Emotion Regulation | 33.22 | 5.75 | -.38** | -.38** | -.44** | -.43** | .85** | .94** | 1 | | |
| Parents/Teachers Expectations | 17.09 | 2.34 | -.33** | -.19** | -.27** | -.28** | .24** | .26** | .25** | 1 | |
| Self-Expectation | 12.51 | 3.71 | -.30** | -.23** | -.29** | -.30** | .30** | .37** | .34** | .66** | 1 |
| Education-Expectation Stress | 29.60 | 5.56 | -.34** | -.23** | -.31** | -.32** | .30** | .36** | .33** | .86** | .90** |

**\***under the confidence level of .05 is significant.     **\*\*** under the confidence level of .01 is also significant

The results in Table 1 show that there is a significant correlation between educational self-efficacy and the difficulty in emotion regulation with that of stressed caused by educational expectations. The results particularly show a positive meaningful correlation between difficulties of emotion regulation with stress caused by educational expectation among junior-high students. On the other hand, it expresses the negative correlation between educational self-efficacy and stress caused by educational expectations.

**Table 2**

*The Fit Index Resulted From the Analysis of the Data and Variables*

| Test | Accepted Amount | Explanation | Resulted Amount |
|---|---|---|---|
| $\chi2/df$ | <3 | chi-squared ratio | 2.287 |
| RMSEA | <0.1 | average root for sec. force of error approximation | .032 |
| GFI | >0.9 | modified index of goodness | 0.996 |
| NFI | >0.9 | index of slow goodness | 0.991 |
| CFI | >0.9 | comparative index of goodness | 0.990 |
| DF | 122 | | |

Based on Table 2, since the RMSEA is .032, and it is less than 0.01, it can be concluded that the mean of the square root of the error in the model is fit; consequently, the model is acceptable. Also, the amount of chi-square with its appropriate degree of freedom is 2.287, and as the resulted amount is between 1 and 3; and on the other hand, the index of GFI, CFI, and NFI is almost equal, we can estimate logically that the model of the variable assessment is suitable.

**Table 3**

*Direct Estimation of the Model with the Maximum Likelihood (ML)*

| Variable | b | B | $R^2$ | t. statistic | Sig. |
|---|---|---|---|---|---|
| Educational self-efficacy resulted from educational expectations | -0.524 | -0.327 | 0.171 | 3.857 | .001 |
| Difficulty in emotion regulation on stress caused by educational expectations | 0.395 | 0.286 | 0.112 | 3.315 | .001 |

The above table shows the resulted amount from the regression statistic weight to determine the amount of the effect, considering the level of significance of the critical t-table. It is shown that the amount of sub-scales on general variable is significant, and also the case is true about the effect of exogenous variable (self-efficacy and the difficulty in emotion regulation) on the final endogenous variable (stress caused by educational expectation).
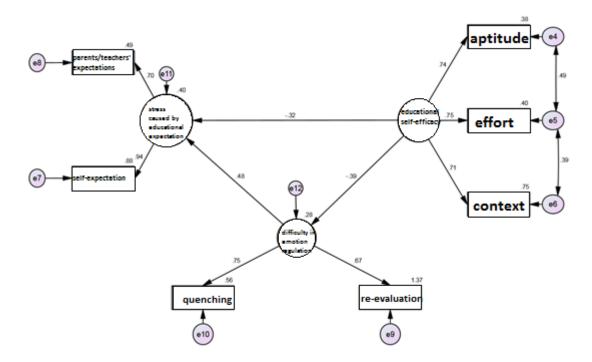
**Table 4**
*The Indirect Estimation of the Model Using the Method of Bootstrap*

| Variable | B | $R^2$ | Low range | High range | Sig. |
|---|---|---|---|---|---|
| Self-Efficacy on stress caused by educational expectations with the mediation of difficulty in emotion regulation | 0.481 | .405 | .341 | 0.539 | **.001** |

Based on the information in Table 4, and considering the standard amount derived from β, the educational self-efficacy indirectly affects the stress caused by educational expectations with the mediation of the difficulty in emotion regulation.

**Figure 1**
*The Final Tested Model along with the Standardized Predictable Parameters*



Based on the resulted statistics from three basic index of absolute, contrastive, and economic; the research model was accepted, and in general, two variables are able to predict the stress caused by educational expectations (R2 = 0.40). In other words, it can be claimed that 40 percent of the stress caused by educational expectancies is justified through direct and indirect ways by educational self-efficacy and difficulty in emotion regulation.

## Discussion

The aim of the research was to study the relationships between students' self-efficacy and stress due to academic expectations mediated by the difficulty of emotion regulation using structural equation modelling. The results of the analysis showed that the educational self-efficacy has direct impact on the stress caused by educational expectancies among junior-high school students. The results are in line with the findings of Khojaste and Montazeri (2018), Koochaki-e Ravandi

(2018), Qasemi and Poor-razavi (2017), Saadat-sajjad et al. (2015), Yin et al. (2020), Ngui, and Lay (2020), and Freireet et al. (2019). To justify this finding, it can be stated that the students who have low educational self-efficacy, feel in despair and danger in reaching their goals and demands. Defeating in getting good results mean to these learners getting far away from the goals because of their own disabilities, hence they may feel stressful as a result of emotion reaction. On the contrary, the students who have high educational self-efficacy along with powerful incentives, receive much less stress than the first group of learners (Ngui & Lay, 2020), because by predicting the inappropriate results, they lose only outward incentives and acceptance of others.

Educational self-efficacy is a tendency to evaluate thoroughly what a person does based on the most excellent criteria. It is the hardest effort to be successful in actions and functions and to get the great enjoyment and happiness as the result of that hard work. This is called the improvement oriented activity which is the baseline of Bandura's self-efficacy. The self-efficacy approach is one approach among many others which has paid attention to the behavior on the aspect of motivation leading to improvement (VanRaalte & Posteher, 2019). This motivation forces them to use their highest efforts and energy to move towards the goal even with the lack of incentives. The cognitive-behavior perspective emphasizes the benefits of thoughts and cognitions which can lead the learners' emotion, mood, and educational self-efficacy. In cognition theory, the belief is that people with good self-efficacy and appropriate actions experience different events and incidents satisfying, interpret the neutral events positive, and the positive events more satisfying and positive than usual; thus, they experience unbelievably less stress (Freireet et al., 2019). As a result, these people's mind gets brighter than ever in such a way that let them control their thoughts and add their self-efficacy.

Also, examining whether the educational self-efficacy has indirect impact on stress caused by educational expectancies by the mediation of the difficulty in emotion regulation among junior-high school students, we found a significant relationship of the variables. The finding is consistent with that of Dodange and Qamari (2019), Khojaste and Montazeri (2018), Mahmoodpoor et al. (2018), Koochaki-e Ravandi (2018), Qasemi and Poor-razavi (2017), Ngui and Lay (2020), and Freireet et al. (2019). The explanation of this finding is that when a learner gains self-efficacy to succeed, s/he expects to face positive consequences, and whenever such a learner loses the motivation to escape the defeats, s/he expects to face negative consequences. By self-efficacy under this full-pressure atmosphere, it means the willingness or interest

to gain success and to participate in classroom activities of which the success in them is due to the learner's abilities and efforts. This effort is dependent on the appropriate emotion regulation (Freireet et al., 2019). Reddy et al. (2018) believed that educational self-efficacy is a tendency to overtake others and try hard to succeed and to move forward based on particular criteria. On the other hand, this process needs to include the emotional regulation which differentiates the various learners' functions (Konaszewski et al., 2019). Also, by emotion regulation, it means how to gain, store, process, and transmit the information by the learners in order to reduce the stress. Educational self-efficacy can lead to better ways of emotion regulation by cognitive modification and cognitive accumulation. Emotion regulation considers the differences among people in observation, thinking, problem solving, the rate of motivation and evaluation of others, and makes a mutual relationship between self-efficacy and emotion regulation which leads better functions and less stress (Fujisato et al., 2020), because stress is always due to ignorance of one's ability and incomplete cognition of environmental information and perception in learning environment which can logically be explained and justified.

## Conclusions

It has been a long time the educational experts have been trying to put special attention to the effective factors related to the success of education. These experts have found out that among many possible factors which can play vital roles in educational circle, stress (in its optimal level) can be the outmost important factor on the way of the learners' success. On the other hand, if this stress moves away from its optimal level and gets more than necessary, it is destructive and a big barrier to success and proficiency. It is also true that the stress caused by educational expectancy is one of the most important factors in students' learning (Freireet et al., 2019). To define the stress caused by academic expectations, it is referred to the evaluation between heterogeneous experiences of situational claims and inner sources of a person. Having a kind of high educational expectations is considered a major factor which can influence, directly or with a mediation, the students' learning proficiency. There is a direct relationship between the expectations for educational success and educational improvements (Hannan, & Orcutt, 2020), but if the expectation is too high, it leads to negative outcomes including the excessive stress and problems in psychological well-beings (Ngui & Lay, 2020). In spite of the fact that stress is a positive competitive stimulation for students' improvements, falling out of its

optimal level causes to affect the psychological well-being of the learners (Dunne et al., 2010). As a result, the optimal stress caused by educational expectations is the most important variable to learners' educational improvements (Alrashidi et al., 2019).

On the other hand, the cognitive factors such as self-efficacy can have great effect on experiencing educational stress (Karaman & Watson, 2017). Fujisato et al. (2020) stated that the cognitive and emotive processes have important roles in a person's self-efficacy, and that these cognitive and emotive factors can also lead to problematic behaviors if working inappropriately. Since the definition of difficulty in emotion regulation is included in behavioral management as well as regulation of emotional experiences, it is crystal clear that self-regulation of emotion is not just the affection processes, but included the cognitive processes too (King et al., 2017) as cognitive abilities help us form emotive life (Daives, 2017). In the area of meta-cognitive, Zelazo and Cunningham (2007) introduced a model in which emotion is one aspect of motivation from cognition to solve a goal oriented problem. In this model, the self-regulation of the emotion was introduced in the form of the first and secondary structures in which the brain is involved in both levels either in performativity or semi function (Herzberg & Gunnar, 2020). The neuro-developmental findings also confirm that the emotion regulation and the performative functions are related and also collaborate with each other in information analysis and doing the activities directly or indirectly (Dávila-Acedo & Borrachero, 2016). Emotion regulation means developing thoughts and behavior which inform people what kind of emotion they have and when this kind of emotion develops in them (Tatnell et al., 2017).

Educational self-efficacy and the difficulty in emotion regulation are the main factors that help the learner how to signify new subjects, the amount of information one can get, and how to keep them in his mind (Cassidy et al., 2016). The discrimination of the learners in how they use different styles to process emotion and cognition is just a simple classification, and does not ever mean that one group is superior to the other in learning and it is just done to study the effects of different styles on success in particular circumstances (Rezaee & Jeddi, 2018). Based on the new method of learning, educational self-efficacy and emotion regulation skill are kinds of control implementations to control the negative factors in learning such as stress and anxiety; the inner process through which the learners choose their styles of noticing, learning, remembering, and thinking; and change these styles whenever needed (Hannan & Orcutt, 2020). Like many other skills and abilities, the difficulty in emotion regulation is not a

mother-born skill, rather it is the result of interaction between the learner and the environmental factors in the process of sociability and development. The educational self-efficacy is a personal and special feature in doing things which makes any voluntary activities possible (Zhang et al., 2016). Therefore, many obvious beliefs of people, their economical thinking, social behavior; and generally, their fundamental and deep traits cause to form a kind of stress which in reality is generated from their constitution, connection with others, the society, their creativity, and their adaptability. If the amount of the generated stress is more than what is needed, it acts as a barrier to success and is absolutely destructive. The results of this research pointed to the role of self-efficacy in educational achievement as well as the negative role of educational stress. As a result, it is suggested that the educational authorities in general, and the classroom teachers in particular, work on the learners' self-efficacy on the first wing, and help them regulate their emotion positively. Moreover, it is recommended to create an stress-free atmosphere in the classroom situation under which the students engage actively and purposefully in task performances without feeling psychological barriers. It is also suggested to other researchers to work on other cognitive and emotional variables which play significant roles in teaching-learning process at different levels.

Like any other studies, there were some limitations in generalizability of the findings and barriers in doing this research. Considering the generalizability limitation, since the research population were female ninth grade students in Tehran, the findings cannot be generalized to male students, to other grades, or to other cities without some precautions and considerations. In the second part of the limitations, the biggest barrier was that the research was done during the corona virus pandemic, so it was really hard to make some sorts of arrangements to distribute and collect the questionnaires physically and face to face; the researcher had no other choice unless to do this part of the task online and it might have affected the desired outcome.

## Conflicts of Interest

No conflicts of interest declared.

## References

Aihie, O. N., & Ohanaka, B. I. (2019). Perceived academic stress among undergraduate students in a Nigerian University. *Journal of Educational and Social Research*, *9*(2), 56.

Aldao, A., Nolen-Hoeksema, S., & Achenbach, T. M. (2010). *Specificity of cognitive emotion regulation strategies: A trans-diagnostic manual for the child*

*behavior checklist/4-18 and 1991 profile*. University of Vermont, Department of Psychiatry.

Alrashidi, O., Phan, H. P., & Ngu, B. H. (2016). Academic engagement: an overview of its definitions, dimensions, and major conceptualizations. *International Education Studies*, *9*(12), 41.

Altunsoy, S., Çimen, O., Ekici, G., Atik, A. D., & Gökmen, A. (2010). An assessment of the factors that influence biology teacher candidates' levels of academic self-efficacy. *Procedia-Social and Behavioral Sciences*, *2*(2), 2377-2382.

Ang, R. P., Huan, V. S., & Braman, O. R. (2007). Factorial structure and invariance of the Academic Expectations Stress Inventory across Hispanic and Chinese adolescent samples. *Child Psychiatry & Human Development, 38*(1), 73-87.

Ang, R. P., & Huan, V. S. (2006). Academic expectations stress inventory: Development, factor analysis, reliability, and validity. *Educational and Psychological Measurement*, *66*(3), 522-539.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachandran (Ed.), *Encyclopedia of human behavior* (pp. 71-81). Academic Press.

Davari, M., Lavasani, M., & Eje-ee, J. (2012). The relation between perfectionism and educational self-efficacy with the aim of students' improvement. *Psychology Journal, 16* (3), 266-281.

Davies, D. (2017). *Death, ritual and belief: The rhetoric of funerary rites*. Bloomsbury Publishing.

Dávila-Acedo, M. A., & Borrachero, A. B. (2016). Evolution of emotion in learning physics and chemistry in secondary education. *Secondary Education: Perspectives, Global Issues and Challenges*, *115*.

Dodangeh, H., & Qamari, M. (2019). *The relationship between attachment styles of emotion with educational anxiety and stress in male students of junior-high school*. The third international conference of research and innovation in educational science, management and psychology, Tehran, Iran.

Dunne, M. P., Sun, J., Do Nguyen, N., Truc, T. T., Loan, K. X., & Dixon, J. (2010). The influence of educational pressure on the mental health of adolescents in East Asia: Methods and tools for research. *Journal of Sciences*, 109-122.

Elias, R. Z. (2008). Anti-intellectual attitudes and academic self-efficacy among business students. *Journal of Education for Business, 84*(2), 110-117.

Etesami, N., Kalhornia, M., & Asgharpoor, M. (2018). *The comparison of emotion regulation and the method of problem solving between ordinary students and the only-child students*. The national conference of the world's new achievement in education, psychology, law, and socio-cultural studies. Islamic Azad University of Zarqan, Khoy.

Fayazi-e Borojeni, E. (2018). *Comparing cognitive-emotive strategies, emotive alalia, and emotion intelligence among girls living under single-parent family and ordinary family*. The 6ᵗʰ scientific-research conference in education and psychology, social and cultural pathology, Tehran, Iran.

Fetsco, T., & McClure, J. (2005). *Educational psychology: An integrated approach to classroom decisions*. Allyn & Bacon.

Freire, C., Ferradás, M., Núñez, J., Valle, A., & Vallejo, G. (2019). Eudemonic well-being and coping with stress in university students: The mediating/moderating role

of self-efficacy. *International Journal of Environmental Research and Public Health*, *16*(1), 48.

Fujisato, H., Ito, M., Berking, M., & Horikoshi, M. (2020). The influence of emotion regulation on posttraumatic stress symptoms among Japanese people. *Journal of Affective Disorders*, *277*, 577-583.

Gadzella, B. M., & Baloglu, M. (2001). Confirmatory factor analysis and internal consistency of student-life stress inventory. *J Instruc Psychol., 6* (28), 84-94.

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, *85*(2), 348.

Hannan, S. M., & Orcutt, H. K. (2020). Emotion regulation in undergraduate students with posttraumatic stress symptoms: A multimethod study. *Psychological Trauma: Theory, Research, Practice, and Policy*, *12*(6), 643.

Harley, J. M., Pekrun, R., Taxer, J. L., & Gross, J. J. (2019). Emotion regulation in achievement situations: An integrated model. *Educational Psychologist*, *54*(2), 106-126.

Herzberg, M. P., & Gunnar, M. R. (2020). Early life stress and brain function: Activity and connectivity associated with processing emotion and reward. *NeuroImage*, *209*, 116493.

Hunter, S., Fears, S. K., Jones, D., & Rennie, N. (2018). *The impact of motivation on the relationship of academic stress and psychological well-being among college students* [Doctoral dissertation]. Brenau University.

Jakešová, J., Kalenda, J., & Gavora, P. (2015). Self-regulation and academic self-efficacy of Czech University students. *Procedia-Social and Behavioral Sciences*, *174*, 1117-1123.

Jamali, M., Nowroozi, A., & Tahmasbi, R. (2013). The influential factors on educational self-efficacy and its relation with educational success of medical students in Bushehr University in 1392-1393. *Iranian Journal of Medical Science, 13* (1), 629-641.

Jnks, J., & Morgan, V. (2020). Children's perceived academic self-efficacy: An inventory scale. *The clearing house*, *72*(4), 224-230.

Karaman, M. A., & Watson, J. C. (2017). Examining associations among achievement motivation, locus of control, academic stress, and life satisfaction: A comparison of US and international undergraduate students. *Personality and Individual Differences*, *111*, 106-110.

Khan, M. (2023). Academic self-efficacy, coping, and academic performance in college. *International Journal of Undergraduate Research and Creative Activities*, *5*(1), 3.

Khojasteh, S., & Montazeri, M. (2018). *The relationship between educational self-efficacy and educational stress in Payame-Noor students in Sirjan Center*. The fifth international conference in psychology, educational science, and life style, Qazvin, Iran.

King, D., Ritchie, S. M., Sandhu, M., Henderson, S., & Boland, B. (2017). Temporality of emotion: Antecedent and successive variants of frustration when learning chemistry. *Science Education*, *101*(4), 639-672.

Konaszewski, K., Kolemba, M., & Niesiobędzka, M. (2019). Resilience, sense of coherence and self-efficacy as

predictors of stress coping style among university students. *Current Psychology*, 1-11.

Koochaki-e Ravandi, Gh. (2018). *The relationship among emotion intelligence, self-efficacy, and stress coping strategies*. The 4th international conference in human science and education. Tehran, Iran.

Lent, R. W., Ireland, G. W., Penn, L. T., Morris, T. R., & Sappington, R. (2017). Sources of self-efficacy and outcome expectations for career exploration and decision-making: A test of the social cognitive model of career self-management. *Journal of Vocational Behavior*, *99*, 107-117.

Mahmudpoor, A., Barzegar, A., Salimi, H., & Yusefi, N. (2018). Predicting the perceived stress based on emotion regulation, experience offense, anxiety sensitivity of the addicted people. *Psychology Studies, 8*(30), 189-206.

Mirzaee-far, D., Nazari, N., & Monazaminia, F. (2020). The relations of teaching skills, educational emotions, educational stress, and perceived behavioral control in predicting the students' educational proficiency. *The Quarterly Scientific-Research Journal of Education, 15*(63), 1-8.

Mohammad, F., Asha, I. K., & Jado, S. M. A. (2014). The effect of TASC wheel on developing self-directed learning readiness and academic self-efficacy on a sample of 7th graders Jordan. *Journal of Education*, *135*(2), 237-251.

Mohammadi, M., Mohebbi, S., Dehghani, F., & Qasemzadeh, M. (2018). The correlation of educational self-efficacy with learning among medical students in Islamic Azan University of Qum. *The Journal of Qum Medical University, 12*(12), 89-98.

Nathaniel, P., Sandilos, L. E., Pendergast, L., & Mankin, A. (2016). Teacher stress, teaching-efficacy, and job satisfaction in response to test-based educational accountability policies. *Learning and Individual Differences*, *50*, 308-317.

Ngui, G. K., & Lay, Y. F. (2020). The effect of emotional intelligence, self-efficacy, subjective well-being and resilience on student teachers' perceived practicum stress: A Malaysian case study. *European Journal of Educational Research*, *9*(1), 277-291.

Pasebani, R., Shokri, O., & Poor-shahriar, H. (2015). The meditative role of stress in the relationship between fear of negative evaluation and emotion well-being between intelligent youth and ordinary ones. *Bi-Quarterly of Modern Psychology, 1*, 57-72.

Purbaghban, S., Rezapour, J., Fathi, A., & Malekirad, A. A. (2013). Evaluation of academic self-efficacy based on implied intelligence beliefs. *European Online Journal of Natural and Social Sciences*, *2*(2), 273-280.

Qasemi, M., & Poor-razavi, V. (2017). *The study of the relationship between self-efficacy and help-demanding behavior with students' educational stress*. The international conference of psychology and social studies. Tehran, Iran.

Raskauskas, J., Rubiano, S., Offen, I., & Wayland, A. K. (2015). Do social self-efficacy and self-esteem moderate the relationship between peer victimization and academic performance? *Social Psychology of Education*, *18*(2), 297-314.

Reddy, K. J., Menon, K. R., & Thattil, A. (2018). Academic stress and its sources among university students.

*Biomedical and Pharmacology Journal, 11*(1), 531-537.

Rezaei, A., & Jeddi, E. M. (2018). Relationship between wisdom, perceived control of internal states, perceived stress, social intelligence, information processing styles and life satisfaction among college students. *Current Psychology*, 1-7.

Saadat Sajad-e Asghari, F., & Jazayeri, R. (2015). The relationship between self-efficacy and perceived stress, checking approaches and perceived social support in Gilan University students. *The Iranian Journal of Teaching in Medical Science, 15* (1), 67-78.

Samani, S., Begholi, H., & Tabandeh-e Haghighi, M. (2013). *The meditative role of processing styles for attachment styles and self-efficacy* [MA Thesis]. Marv-dasht Islamic Azad University.

Saracaloglu, A. S., & Dinçer, I. B. (2009). A study on correlation between self-efficacy and academic motivation of prospective teachers. *Procedia-Social and Behavioral Sciences*, *1*(1), 320-325.

Tahmasbian, K., & Anari, A. (2012). The direct and indirect relationship between self-efficacy and depression in youth. *Journal of Psychological Achievements, 4*(1), 227-244.

Takano, K. I., & Reason, J. (2017). Modelling of human errors in cognitive processes observed in dynamic environments. *Engineering Psychology and Cognitive Ergonomics*, *5*.

Tan, J. B., & Yates, Sh. (2011). Academic expectations as sources of stress in Asian Students. *Soc Psychological Education, 14*, 389–407.

Tatnell, R., Hasking, P., Newman, L., Taffe, J., & Martin, G. (2017). Attachment, emotion regulation, childhood abuse and assault: examining predictors of NSSI among adolescents. *Archives of Suicide Research*, *21*(4), 610-620.

Van Raalte, L. J., & Posteher, K. A. (2019). Examining social support, self-efficacy, stress, and performance, in US Division I collegiate student-athletes' academic and athletic lives. *Journal for the Study of Sports and Athletes in Education*, *13*(2), 75-96.

Weems, C. F., & Pina, A. A. (2010). The assessment of emotion regulation: Improving construct validity in research on psychopathology in youth—an introduction to the special section. *Journal of Psychopathology and Behavioral Assessment*, *32*(1), 1-7.

Yin, H., Han, J., & Perron, B. E. (2020). Why are Chinese university teachers (not) confident in their competence to teach? The relationships between faculty-perceived stress and self-efficacy. *International Journal of Educational Research*, *100*, 101529.

Ying, C., Liu, C. J., He, J., & Wang, J. (2018). Academic stress and evaluation of a mindfulness training intervention program. *NeuroQuantology*, *16*(5).

Yuan, G., Xu, W., Liu, Z., Liu, C., Li, W., & An, Y. (2018). Dispositional mindfulness, posttraumatic stress disorder symptoms and academic burnout in Chinese adolescents following a tornado: The role of mediation through regulatory emotional self-efficacy. *Journal of Aggression, Maltreatment & Trauma*, *27*(5), 487-504.

Zelazo, P. D., & Cunningham, W. A. (2007). *Executive Function: Mechanisms Underlying Emotion Regulation*.

Zhang, L., Qin, S., Yao, Z., Zhang, K., & Wu, J. (2016). Long-term academic stress enhances early processing of facial expressions. *International Journal of Psychophysiology*, *109*, 138-146.

Zhao, L. (2017). Discussion on introducing emotional teaching into 'chemistry foundation' course. *DEStech Transactions on Social Science, Education and Human Science*, (ssme).