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Use of Cognitive Emotion Regulation Strategies and their Association with Academic Burnout of University Students

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ABSTRACT

Academic burnout is one of the biggest issues of the modern period. Academic burnout is depicted by a prolonged lack of interest in the student's studies and a loss in output. This study set out to measure the degree of academic burnout experienced by university students, examine differences in their academic burnout levels, and ascertain whether academic burnout and CER Strategies are related. This survey study included a quantitative analysis of the three campuses of the University of Education Lahore. A correlation design was used. The target population consisted of both male and female students enrolled in the three campuses of university. The multistage sampling was used to collect sample of 300 students, with an equal representation of 150 males and 150 females. Two scales were included in a closed-ended questionnaire of survey. The study's findings indicate that academic stress leads to academic burnout among university students. The study also found that students in the Science and Education divisions report the same level of cynicism, but students in the Arts and Social Sciences division differ significantly. Adaptive cognitive emotion regulation strategies had a significant negative correlation, in contrast to the high positive association observed with maladaptive cognitive emotion regulation strategies. Future teacher educators and policy maker can adopt such strategies to reduced academic burns out in higher educational institutions.

| **KEYWORDS** | Academic Burnout, Fatigue, Inefficiency, Cynicism, Cognitive Emotion, Regulation Strategies |

Introduction

Burnout is a multifaceted psychological syndrome that has garnered significant attention in various professional fields including higher education (Maslach & Leiter 2016). Academic burnout is a real possibility if students are under excessive strain and do not take adequate strategies. (Schaufeli et al, 2004). Different types of experience of academic burnout can lead to a decline in students' academic engagement, motivation, and overall well-being, ultimately affecting their educational outcomes (Jacobs & Dodd, 2003; Schaufeli, et al., 2002).

Academic burnout has three dimensions i.e. emotional exhaustion, cynicism, and academic inefficiency (Schaufeli et al, 2002). Emotional exhaustion is being developed in the students as they feel burdened to get academic success. When students cannot achieve the expected level of excellence they begin to behave indifferently and develop a negative and cynical attitude towards school and the process of learning, and this

phenomenon is known as cynicism. A sense of inadequacy and incompetence is known as academic inefficiency which is the last dimension of academic burnout.

In the lives of students, emotions play a major role. Students' ability to participate in academic work and achieve academic success might be influenced by their emotions. A person can learn how to prioritize their tasks, manage difficult social situations, and reduce anxiety by practicing emotion regulation (ER). The focus of cognitive emotion regulation was on how you cognitively manage your emotions. CERS are being used to cope with any unpleasant event that causes burnout among students. Nine CERS have been identified. Positive refocusing, refocus on planning, positive reappraisal, acceptance, and putting into perspective are adaptive CERS. Self-blame, rumination, catastrophizing, and other blame are maladaptive CERS (Garnefski et al., 2001).

Positive refocusing refers to the practice of focusing on positive memories. Refocus on planning means considering future actions and how to deal with an unpleasant situation instead of focusing on stressful incidents. Giving a positive meaning to a negative circumstance is referred to as positive reappraisal. It is a typically positive coping approach. Putting things into perspective entails diminishing negative incidents by considering other, more significant situations.

Literature Review

Academic burnout among adolescents has been examined in several prior types of research (Walburg, 2014). Girls and boys experience different levels of burnout and stress. An Iranian study has found that there is a link between the degrees of academic stress and burnout that male students and female students face in their lives (Bikar et al., 2018). In another study of Nigerian Tertiary Institutions students participated to determine the extent to which they felt the effects of academic burnout. The sample size was 60 students. No significant difference was found regarding academic burnout based on gender (Beirão et al., 2020).

Purvanova and Muros (2010) in their research found that the relationship between gender and academic burnout produced inconsistent findings. These relationships were consistent with the degree and direction of interaction between the two variables. It also found that women were more emotionally exhausted than men while men appear to be more depersonalized. In two other studies, burnout was determined to be more prevalent in males (Youree, 1984; Bivens, 1985). Furthermore, it was also observed that depersonalization is more common in men than women, who are more emotionally exhausted (Lackritz, 2004).

In another study conducted on college students' academic burnout and engagement the links between burnout symptoms and negative perfectionism (self-doubt about activities, anxiety about mistakes) had been found, and there were no significant gender differences in finding (Zhang et al., 2007). Another Portuguese study of middle school pupils found no differences in exhaustion or indifference between the sexes at all (Cadime et al., 2016). So, the research regarding burnout based on gender differences has thus far proved inconclusive. Students' emotional well-being has a direct impact on their ability to focus on their studies, which in turn has a direct impact on their chances of academic achievement (Durlak et al., 2011). Additionally, it is widely accepted that psychological well-being and performance are dependent on effective ER (Morrish, 2018).

Academic burnout contributes to a high dropout rate and serious health issues among students. Students should use appropriate CER strategies, and they should avoid inappropriate CER strategies to overcome academic burnout. Depending on their impact on effect, behavior, and cognition, specific CERS can be classified as either adaptive or maladaptive (Nolen-Hoeksema & Aldao, 2011; Garnefski et al., 2001). When compared to other CERS, certain CERS have a much stronger association with emotional difficulties and improved coping abilities. Other than being more adaptable, some CERS appear to attract more sophisticated types of reflection. During adolescence, most of these cognitive resources become available, although they haven't yet reached adult levels of functioning. Emotional regulation must therefore be viewed from a developmental point of view. Adolescents' self-regulation and cognitive abilities may be limited, making cognitively more demanding strategies (such as positive reappraisal) less readily available (Harley et al., 2019).

People who employ adaptive CERS are likely to have lower levels of psychopathology, whereas people who employ maladaptive CERS are likely to have higher levels of psychopathology. Academic burnout is associated with the latter (Salmela-Aro et al., 2009). A study was conducted on students at the University. The results found that reappraisal and suppression both influenced academic outcomes and that these effects were mediated by burnout (Seibert et al., 2017). Among middle school children, a person-centered study found that academic burnout followed the same coping pattern as anxiety and depression, two well-known psychopathologies (Vinter, 2019). Adolescents use positive refocusing and refocus on planning CERS to cope with stress. Refocusing on something positive instead of something negative is referred to as positive refocusing. To think about what you can do next to deal with a stressful situation is refocus on planning. Rumination is the maladaptive CERS that is utilized by adolescents the most frequently. Rumination is the act of repeatedly revisiting the distressing thoughts and feelings evoked by a traumatic event (Garnefski et al., 2001).

A study was conducted on students of Estonia examined academic burnout and its associations with CERS. 326 adolescents had been taken out of them165 girls were there (Vinter et al., 2021). Positive refocusing, refocus on planning, and rumination CERS were used. There were no significant variations in the results between the sexes; rumination was most strongly associated with burnout in both sexes. Girls also reported higher degrees of exhaustion than boys. Teenagers are particularly vulnerable to academic burnout and academic drop out because of their high school workloads (Bask & Salmela-Aro, 2013). Emotional regulation has been linked to burnout in the past, but little emphasis has been dedicated to specific strategies for regulating emotions in the academic setting (Burić et al., 2016).

Cognitive, metacognitive, behavioral, motivational, and social-emotional elements are all important in helping students learn and succeed. Most of these fields have seen an upsurge in attention in recent decades. Even though the level of experiencing stress is high among adolescents, ER has only lately begun to gain the attention of the academic community (Murberg & Bru, 2007).

Due to constant increase in academic pressure students begin to develop a negative attitude towards university and their academic performance is affected badly. They also started using maladaptive CER strategies to overcome this situation. There are growing worries regarding the mental health of university students around the world (Stallman, 2010), as well as the elevated levels of stress and exhaustion that relate to a dropout of students (Deary et al., 2003). Thus, among university male and female students enrolled in various graduate programs (science, social science, education),

academic burnout and its three dimensions were examined. This study examined the relationship between academic fatigue and CER techniques.

Material and Methods

This investigation was based on quantitative methodology and descriptive in nature. The correlation research techniques were also utilized to investigate university students' usage of CER strategies and their association with academic burnout. A cross-sectional survey has been conducted. The target population consisted of all students at the University of Education Lahore. The sample was chosen using a multistage and stratified random sampling was used as technique to choose the graduate students of different programs of three different campuses of Lahore. The sample consisted of 300 students (50 each from six programs).

A closed-ended questionnaire consisting of 53 items was used. The construction of questionnaire was based on an analysis of related evidence that was used to study the CER strategies and their association with academic burnout among university students. The first part of the instrument data was based on the demographic characteristics. The second part concentrated on exploring academic burnout among university students and for that purpose a five-point Likert-type scale with 17 items was used. The third part focused on exploring the use of CER strategies by university students. A total of 36 items were used to describe the CERS. For validation of instrument the researcher gets expert opinions and conducted pilot testing on 60 students studying at the University of Punjab Lahore. The instrument's total dependability was 0.79.

After finalizing the instrument, the researcher visited the different campuses of the University of Education for data collection. A total number of 300 questionnaires were distributed among university students. The rate of returning the questionnaire was 100% due to personal administration. Voluntary, informed consent and participation was ensured Participants were also assured that they were allowed to refuse participation in the study.

Results and Discussion

The data supported the fact that university students report academic burnout due to academic stress. To observe the gender differences regarding academic burnout among university students a t-test was used.

Table 1
Comparison of Academic Burnout among UE Students based on Gender

Academic Burnout Scales	Gender of students	Mean	Standard Deviation	Degree of freedom	t	Sig (2-tailed)
E-E	Female	17.83	3.95	297	.675	.500
	Male	17.46	5.60			
C	Female	18.99	5.35	297	-1.71	.088
	Male	18.06	5.47			
A-I	Female	22.68	5.06	297	.756	.450
	Male	22.64	7.01			
T-B	Female	59.04	8.59	297	-.144	.885
	Male	59.20	10.44			

Note: = E-E =Emotional Exhaustion; C =Cynicism; A-I = Academic Inefficiency

Male and female university students were compared using a t-test for Academic Burnout. No significant difference was found between average scores for male and female students studying at the University of Education on three dimensions of

academic burnout and overall academic burnout scale. *Mean* = 59.20 and the *Standard Deviation* =10.44 for male university students regarding overall academic burnout. *Mean* = 59.04 and *Standard Deviation* = 8.59 for female university students regarding overall academic burnout. So, there is no obvious difference in the means as the *t* (297) = -.144, p = .885

Table 2
Gender-Wise Comparison of Use of Adaptive and Maladaptive CERS

CER Strategies Scales	Gender of Students	Mean	Standard Deviation	Degree of freedom	t	Sig (2-tailed)
SB	Female	14.18	4.14	297	1.23	.217
	Male	13.64	3.49			
A	Female	15.22	2.99	297	2.23	.026
	Male	14.42	3.20			
R	Female	14.55	2.98	297	1.55	.120
	Male	14.00	3.05			
PR	Female	14.07	3.33	297	-2.40	.017
	Male	15.20	4.66			
RP	Female	14.48	3.29	297	-1.24	.215
	Male	15.06	4.62			
PR	Female	15.58	5.70	296	.312	.755
	Male	15.40	5.04			
PP	Female	14.04	3.26	297	1.62	.104
	Male	13.42	3.31			
C	Female	13.67	5.51	297	-1.07	.281
	Male	14.28	4.02			
OB	Female	10.91	4.27	296	-3.02	.003
	Male	12.86	6.61			
ACERS	Female	73.39	12.10	296	-.070	.944
	Male	73.50	14.44			.232
MACERS	Female	53.32	9.92	296	-1.19	
	Male	54.81	11.42			

Male and female university students were compared using a t-test regarding the use of CERS. No significant difference was found between average scores for male and female students studying at the University of Education on the use of CERS and the overall CERS scale. *Mean* = 73.50 and *Standard Deviation* = 14.44 for male university students regarding the use of the overall five adaptive strategies of CER. *Mean* = 73.39 and *Standard Deviation* = 12.10 for female university students regarding the use of the overall five adaptive strategies of CER. So, there is no obvious difference in the means as the *t* (297) = -.0701, p = .944. *Mean* = 54.81and *Standard Deviation* = 11.42 for male university students regarding the use of the overall four maladaptive strategies of CER. *Mean* = 53.32 and *Standard Deviation* = 9.92 for female university students regarding the use of the overall four maladaptive strategies of CER. So, there is no obvious difference in the means as the *t* (296) = -1.19, p = .232.

Table 3
Descriptive of Division-Wise Level of University Students' Academic Burnout

	Divisions of UE	Mean	Std. Deviation
Emotional Exhaustion	Science	18.01	6.3
	Education	18.08	3.4
	Arts and Social Sciences	16.8	4.1
	Total	17.6	4.8
Cynicism	Science	19.2	5.8
	Education	19.6	4.7
	Arts and Social Sciences	16.7	5.2
	Total	18.5	5.4
Academic Inefficiency	Science	21.6	7.2
	Education	24.0	6.1

	Arts and Social Sciences	23.1	4.4
	Total	22.9	6.1
Total Burnout	Science	58.9	11.2
	Education	61.7	8.9
	Arts and Social Sciences	56.7	7.6
	Total	59.1	9.5

The above-mentioned table illustrates the descriptive analysis of Students' overall academic burnout in terms of three dimensions based on three divisions of the University of Education. The average score for the overall three divisions regarding emotional exhaustion is 17.6. The standard deviation for the overall three divisions regarding emotional exhaustion is 4.8. The average score for the overall three divisions regarding cynicism is 18.5. The standard deviation for the overall three divisions regarding cynicism is 5.4. The average score for the overall three divisions regarding academic inefficiency is 22.9. The standard deviation for the overall three divisions regarding academic inefficiency is 6.1. The average score for the division of science regarding overall academic burnout is 58.9. The standard deviation for the division of science regarding overall academic burnout is 11.2. The average score for the division of Education regarding overall academic burnout is 61.7. The standard deviation for the division of Education regarding overall academic burnout is 8.9. The average score for the division of Arts and Social Sciences regarding overall academic burnout is 56.7. The standard deviation for the division of Arts and Social Sciences regarding overall academic burnout is 7.6. The average score for the overall three divisions regarding overall academic burnout is 59.1. The standard deviation for the three divisions regarding overall academic burnout is 9.5.

Table 4
Division-Wise Comparison of Level of University Students' Academic Burnout

Variables		Degree of freedom	Sum of Squares	Mean Scores	F	p
E-E	Between Group Variance	2	97.04	48.5	2.087	.126
	Within Group Variance	297	6905.7	23.2		
C	Between Group Variance	2	499.0	249.5	8.920	.000
	Within Group Variance	297	8307.5	27.9		
A-I	Between Group Variance	2	281.4	140.7	3.853	.022
	Within Group Variance	297	10847.8	36.5		
T-B	Between Group Variance	2	1246.4	623.2	7.131	.001
	Within Group Variance	297	25956.9	87.3		

Table 4 illustrates that respondents studying at three different divisions of the University of Education do not differ regarding emotional exhaustion and academic inefficiency. The respondents of three different divisions of the University of Education differ regarding cynicism. For emotional exhaustion dimension of academic burnout f (2,297) =2.087, p=0.126. For the cynicism dimension of academic burnout f (2,297) =8.920, p<0.001. For academic inefficiency dimension of academic burnout f (2,297) =3.853, p=0.22. For overall academic burnout f (2,297) =7.131, p=0.001.

Table 5
Division-Wise Comparison of mean of University Students' Academic Burnout

Variables		Division of UE (I)	Division of UE (J)	Mean Difference (I-J)	Std. Error	Sig.
E-E		Science	Education	-.0700	.681	.918
			Arts and	.1700	.681	.087

		Social Sciences			
	Education	Science	.0700	.681	.918
		Arts and Social Sciences	0.2400	.681	.070
	Arts and Social Sciences	Science	-.1700	.681	.087
		Education	-.2400	.681	.070
C	Science	Education	-.3900	.747	.602
		Arts and Social Sciences	0.5200*	.747	.001
	Education	Science	.3900	.747	.602
		Arts and Social Sciences	2.9100*	.747	.000
	Arts and Social Sciences	Science	-0.5200*	.747	.001
		Education	-2.9100*	.747	.000
A-I	Science	Education	-0.3400*	.854	.007
		Arts and Social Sciences	-.51	.854	.078
	Education	Science	0.3400*	.854	.007
		Arts and Social Sciences	.8300*	.854	.332
	Arts and Social Sciences	Science	.51	.854	.078
		Education	-.8300*	.854	.332

*.The mean difference is significant at the 0.05 level.

The table illustrates that respondents studying at three different divisions of the University of Education do not differ regarding emotional exhaustion and academic inefficiency. The students studying at divisions of Education and Arts & Social Sciences differ in their reported level of cynicism. The students do not differ in their reported level of emotional exhaustion in both the Science and Arts & Social Science divisions, f (2,297) =2.087, p=0.087. The mean difference is 0.1. Students do not differ in their reported level of emotional exhaustion in both the Education and Science divisions, f (2,297) =2.087, p=0.918. The mean difference is 0.70. Students do not differ in their reported level of emotional exhaustion in both the Education and Arts and Social Sciences divisions, f (2,297) =2.087, p=0.70. The mean difference is 0.2.

The table illustrates that the students studying at Science and Arts and Social Sciences divisions do not differ in their reported level of cynicism, f (2,297) =8.920, p=0.001. The mean difference is 0.5. Students studying at Education and Science divisions, f (2,297) =8.920, p=0.602 do not differ in their reported level of cynicism. The mean difference is 0.39. The students differ in their reported level of cynicism in both the Education and Arts & Social Sciences divisions, f (2,297) =8.920, p=0.000. The mean difference is 2.91.

The table illustrates that the students studying at Science and Arts and Social Sciences divisions do not differ in their reported level of educational inefficiency, f (2,297) =3.853, p=0.78. The mean difference is 0.51. Students studying at Education and Science divisions, f (2,297) =3.853, p=0.007 do not differ in their reported level of educational inefficiency. The mean difference is 0.34. The students do not differ in their

reported level of educational inefficiency in both the Education and Arts & Social Sciences divisions, f (2,297) =3.853, p=0.332. The mean difference is 0.830.

Table 6
Division-Wise Comparison of mean of University Students' Academic Burnout

Variables	Division of UE (I)	Division of UE (J)	Mean Difference (I-J)	Std. Error	Sig.
T-B	Science	Education	-0.800*	1.32	.035
		Arts and Social Sciences	0.180	1.32	.100
	Education	Science	0.800*	1.32	.035
		Arts and Social Sciences	4.980	1.32	.000
	Arts and Social Sciences	Science	-0.180	1.32	.100
		Education	-4.980	1.32	.000

*. The mean difference is significant at the 0.05 level.

This table illustrates that the students report the same level of academic burnout in both the Science and Arts & Social Sciences divisions, f (2,297) =7.131, p=0.100. The mean difference is 0.180. This table illustrates that the students report the same level of academic burnout in both the Education and Science divisions f (2,297) =7.131, p=0.035. The mean difference is 0.80. This table illustrates that the students do not report the same level of academic burnout in either the Education and Arts & Social Sciences divisions, f (2,297) =7.131, p=0.000. The mean difference is 4.98.

Table 7
Correlation of academic burnout with cognitive emotion regulation strategies

	E -E	C	A-I	T-B	A-CERS	M-A-CERS
E -E	1					
C	.464**	1				
A-I	.450**	.521**	1			
T-B	.675**	.663**	.538**	1		
A-CERS	-.202**	-.381**	-.207**	-.223**	1	
M-A-CERS	.523**	.636*	.535**	.291**	.472**	1

**. Correlation is significant at the 0.01 level (two-tailed).

The above-presented table illustrates that the relationship between A-CERS and E-E is statistically significant as the value of (r= -0.2 and p < 0.01) and the relationship between A-CERS and C is statistically significant as the value of (r= -0.3 and p < 0.01). This table also illustrates that the relationship between A-CERS and A-I is statistically significant as the value of (r= -0.2 and p < 0.01) and the relationship between A-CERS and T-B is statistically significant as the value of (r= -0.2 and p < 0.01).The above-presented table illustrates that the relationship between M-A-CERS and E-E is statistically significant as the value of (r=0.5 and p < 0.01) and the relationship between M-A-CERS and C is statistically significant as the value of (r=0.6 and p < 0.01).The above-presented table illustrates that the relationship between M-A-CERS and A-I is statistically significant as the value of (r=0.5 and p < 0.01) and the relationship between M-A-CERS and T-B is statistically significant as the value of (r=0.2 and p < 0.01).

Academic burnout has emerged as one of the most important challenges among students, with a large proportion of the student population suffering from it. Excessive levels of academic-related stress have been linked to anxiety and lower well-being as well as lower academic achievement. Academic burnout has been linked to not just decreased academic achievement and dropping out of school among adolescents but also

to suicidal tendencies among university students. Students can overcome academic stress using appropriate adaptive CERS. Rather than relying on maladaptive strategies to deal with stress, teachers and counselors should educate students on the difference between the two.

Conclusions

The students studying at the University of Education report academic burnout. They mostly suffer from the third dimension of burnout, i.e. academic inefficiency. No significant difference has been found between the average scores of male and female students of three divisions of UE regarding the overall academic burnout along with its three dimensions. The average scores for male and female students at the University of Education do not differ significantly regarding the use of adaptive and maladaptive CER strategies as well as in the overall adaptive and maladaptive CER strategies scale.

The students of the divisions of Science and Arts & Social Sciences report the same level of emotional exhaustion. The students of the divisions of Education and Science report the same level of emotional exhaustion. The students of the divisions of Education and Arts &Social Sciences report the same level of emotional exhaustion. The students of the divisions of Science and Arts & Social Sciences report the same level of cynicism. The students of the divisions of Education and Science report the same level of cynicism. The students of the divisions of Education and Arts &Social Sciences do not report the same level of cynicism.

The students of the divisions of Science and Arts &Social Sciences report the same level of educational inefficiency. The students of the divisions of Education and Science report the same level of educational inefficiency. The students of the divisions of Education and Arts & Social Sciences report the same level of educational inefficiency. Hence, it is concluded that the students of the divisions of Science, Education, and Arts and Social Sciences report the same level of emotional exhaustion, academic inefficiency, and overall burnout. The students of the divisions of Education and Science also report the same level of cynicism, but the students of the divisions of Education and Arts and Social Sciences do not report the same level of cynicism. A statistically significant negative correlation has been found between adaptive CERS and three dimensions of academic burnout and overall academic burnout. A statistically significant positive correlation has been found between maladaptive CERS and the dimensions of academic burnout and overall academic burnout.

Recommendations

Future research could be performed at elementary, secondary, and college levels of education to raise knowledge of CERS to overcome academic burnout as students studying at these levels suffer from stress and face dropout and failure. As the research was conducted on only one public university in Lahore, i.e. the University of Education, future research can be conducted on different categories like public and private universities or professional universities of Lahore as well as of Punjab. In the future, a larger sample size can be used to investigate academic burnout and its association with the adaptive and maladaptive CERS. Quantitative design of research had been used in this research, but for better results, qualitative research designs can also be used in the future. As the instrument of study was a closed-ended questionnaire, an open-ended questionnaire or in-depth interviews can be used to get more detailed information from respondents in the future.

References

Bask, M., and K. Salmela-Aro. 2013. "Burned Out to Drop Out: Exploring the Relationship between Burnout and School Dropout." *European Journal of Psychology of Education 28 (2):* 511–528. doi:10.1007/s10212-012-0126-5

Beirão, D., Monte, H., Amaral, M. *et al.* Depression in adolescence: a review. *Middle East*

Bikar, S., Marziyeh, A., & Pourghaz, A. (2018). Affective structures among students and their relationship with academic burnout with emphasis on gender *International Journal of Instruction*, *11*(1), 183–194. https://doi.org/10.12973/iji.2018.11113a

Burić, I., Sorić, I., & Penezić, Z. (2016) Emotion regulation in the academic domain: Development and validation of the academic emotion regulation questionnaire (AERQ). *Personality and Individual Differences, 96,* 138–147

Cadime, I., Lima, S., Marques Pinto, A., & Ribeiro, I. (2016). Measurement invariance of the Utrecht Work Engagement Scale for Students: a study across secondary school pupils and university students. *European Journal of Developmental Psychology*, 13(2), 254e263 http://dx.doi.org/10.1080/17405629 2016.1148595

Deary, I. J., Watson, R., and Hogston, R. (2003) longitudinal cohort study of burnout and attrition in nursing students *J. Adv. Nur.*43, 71–81

Durlak, J. A., Dymnicki, A. B., Taylor, R. D., Weissberg, R. P., & Schellinger, K. B. (2011). The impact of enhancing student's social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405–432.

Garnefski, N., Kraaij, V., & Spinhoven, P. (2001) Negative life events, cognitive emotion regulation, and emotional problems *Personality and Individual Differences*, 30(8), 1311–1327

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. https://doi.org/10.1080/00461520.2019.1587297

Jacobs, SR, & Dodd, D. (2003). Academic burnout as a function of personality, social support, and workload. J Coll Student Dev 3:291–296 Burnout and engagement in health profession students: The relationships between study demands, study resources, and personal resources. *The Australasian Journal of Organizational Psychology* (2015)

Lackritz, J. R. (2004). Exploring burnout among university faculty: Incidence, performance, and demographic issues *Teaching and Teacher Education, 20*(7), 713–729 https://doi.org/10.1016/j.tate.2004.07.002

Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: recent research and its implications for psychiatry. *World psychiatry, 15(2)*, 103-111 https://doi.org/10.1002/wps.20311

Morrish, L., Rickard, N., Chin, T. C., & Vella-Brodrick, D. A. (2018) Emotion regulation in adolescent well-being and positive education *Journal of Happiness Studies*, *19*(5), 1543–1564. https://doi.org/10.1007/s10902-017-9881-y

Murberg, T. A., & Bru, E. (2004) School-Related Stress and Psychosomatic Symptoms among Norwegian *Adolescents School Psychology International, 25,* 317-332. http://dx.doi.org/10.1177/0143034304046904

Nolen-Hoeksema, S., & Aldao, A. (2011) Gender and age differences in emotion regulation strategies and their relationship to depressive symptoms *Personality and Individual Differences, 51*(6), 704–708. https://doi.org/10.1016/j.paid.2011.06.012

õppekeelega õpilaste hulgas [Academic burnout among Estonian and Russian middle school students]. *Estonian Journal of Education*, *7*(1), 127–155.

Panadero, E. (2017). A review of self-regulated learning: Six models and four directions for research. Frontiers in Psychology, 8, 422

Purvanova, R. K., & Muros, J. P. (2010) Gender differences in burnout: A meta-analysis. *Journal of Vocational Behavior, 77*(2), 168–185. https://doi.org/10.1016/j.jvb.2010.04.006

Salmela-Aro, K., Savolainen, H., & Holopainen, L. (2009) Depressive symptoms and

Schaufeli, W. B., & Bakker, A. B. (2004) Job demands, job resources and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, *25*, 293–437. https://doi.org/10.1002/job.248

Schaufeli, W. B., Martinez, I. M., Marqués-Pinto, A., Salanova, M., & Bakker, A. B. (2002) Burnout and engagement in university students: A cross-national study *Journal of Cross-Cultural Studies*, 33 (5), 464-481

school burnout during adolescence: evidence from two cross-lagged longitudinal studies. *Journal of Youth and Adolescence*, 38, 1316–1327.

Seibert, G. S., May, R. W., Fitzgerald, M. C., & Fincham, F. D. (2017). Understanding school burnout: Does self-control matter? *Learning and Individual Differences*, 49, 120–127

Stallman, H. M. (2010). Psychological distress in university students: a comparison with general population data. *Aust. Psychol.* 45, 249–257. doi:10.1080/00050067.2010.482109

Vinter, K. (2019). Examining academic burnout: Profiles and coping patterns among Estonian middle school students *Educational Studies*, https://doi.org/10.1080/03055698.2019.1702510

Vinter, K., Aus, K., & Arro, G. (2021) Akadeemiline läbipõlemine Eesti ja vene

Walburg, V. (2014) Burnout among high school students: A literature review. *Children and Youth Services Review*, 42, 28–33. https://doi.org/10.1016/j.childyouth.2014.03.020

Zhang, Y., Gan, Y., & Cham, H. (2007) Perfectionism, academic burnout, and engagement among Chinese college students: A structural equation modeling analysis. *Personality and Individual Differences, 43, 1529-1540.*