

## THE EFFECT OF STRESS COPING PROGRAM ON BURNOUT LEVELS OF HIGH SCHOOL STUDENTS\*

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### ABSTRACT

The purpose of this study is to examine the effect of "Stress Coping Program" on the levels of burnout of high school students. Pretest-Posttest controlled group design was used in this research. The study group included 20 individual selected among students carry on education in the Şevket Pozcu High School within 2011-2012 academic year and who volunteered to participate in the group work. 10 of them took place in the experimental group, 10 of them took place in the placebo control group. Maslach Burnout Inventory that was adapted by Çapri, Gündüz, & Gökçakan (2011) was used as a measurement. And also Personal Information Form was used to know personal information. While 8 sessions of Stress Coping Program were applied to the experimental group, in order to reduce and control the Hawthorne effect 8 sessions of the placebo activity program was applied to the placebo control group. In order to determine whether the long lasting effect of Stress Coping Program continue or not, follow up study was held after 1 month and 2 months. One- factor analysis of covariance (ANCOVA), t-test and Wilcoxon signed rank test were used during data analysis. The significance level was taken as 0.05 in the interpretation of the collected data with SPSS 17.0 statistical software program. As a result of the study it is observed that Stress Coping Program is effective in reducing exhaustion and depersonalization scores of the experimental group and the effect is continued after 1 and 2 months after the end of the study.

**Key Words:** Student burnout, Stress coping program, High school students.

### INTRODUCTION

By our educational system, years of high school are a period affecting the future of the person and steering the future. Area selection determines and limits higher education programs which can be studied. Scores received in the period of secondary education are affecting the entry to the Student Selecting Exam. In this case, short-term purpose of this adolescent may be to be very well prepared to come examinations and to get high marks, medium-term purpose may be to keep this success at the upper classes and get high marks from YGS and LGS. Long-term purpose is to work in a good job, to go abroad, to build an academic career, to produce an important invention, etc. In this process students are required to make important decisions and to be in a constant struggle. All these stages are experienced together with problems of adolescence of students (Güner, 2006).

Adolescence is one of the most critical and problematic periods in human life which is between childhood and adulthood, physically, personally, sexually, cognitively, morally, socially and emotionally developing of individual, experiencing rapid changes in the body, considered as "Stormy and Stressful" period by the theorists. Transition of close relations of family environment to close relations of circle of friends; orientation

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to independence by breaking of the mother; search for identity; adapting to social and sexual roles; identification efforts to find the ideal ego; effort to make and search for different, varied and something new; acceptance and adoption of body image and living satisfied with it can be considered among the most important developmental stresses compelling the young individuals and which must be experienced by the essence of this period. A young individual has difficulty in both emotionally, cognitively and behavioral levels, lives stresses require new adaptations (Baltaş & Baltaş, 1985).

Excessive workload, poorness of resting time, students' demands can not to be met, lack of professional skills of administrators and teachers, insufficient guidance activities, conflicts among students, lack of social environments, pressure of administrator and teacher, non-democratic classroom management are causes lead to stress at school for adolescent students. Socio-economic status of family, parent education, conflicts out of school, living environment of family, use of cigarette and alcohol are among the causes of stress outside the school for adolescent students (Eker, 2007). Stress arises when there is imbalance between abilities of individual and wishes of the environment. Organism goes through the alarm state in order to protect itself against stress, afterwards normally offers resistance and finally stress resulting with exhaustion reaches serious levels (Kavla, 1998). By many specialists burnout is recognized as a result of failed attempts to cope with a variety of negative stress situations (Farber, 1984).

The concept of burnout firstly has been included in the book written by Greene (1961). According to The New York Times book describes the experiences of an architect who lost the motivation to work, not suffering and laughing, tired and bored (Maslach & Leiter, 1997). The first definition of burnout is expressed by Freudenberger (1974) as exhaustion caused by failure, fatigue or intense demands on energy, power and resources. The concept of burnout has become increasingly popular with the development of Maslach Burnout Inventory (Maslach & Jackson, 1981). Researches about burnout initially concentrated in occupations those subjects are human (teachers, doctors, nurses, psychologists etc.) (Maslach & Leiter, 1997). The first version of the Maslach Burnout Inventory is Maslach Burnout Inventory-Human Service Survey (MBI-HSS) which assessing symptoms of exhaustion in professions those working subject is human (Çapri, Gündüz, & Gökçakan, 2011). Then Maslach Burnout Inventory-Educators Survey (MBI-ES) is developed to be used for teachers which is another profession group requires face-to-face relationship and interaction. The difference between MBI-HSS and MBI-ES is to use the word "student" instead of "patient" (Maslach, Schaufeli, & Leiter, 2001). Almost a quarter of a century researches and applications showed that is a phenomenon also occurred outside the human service area and extended to cover all occupational groups (Maslach & Leiter, 1997). The Maslach Burnout Inventory has been adapted to those outside the service sector and this new version is called Maslach Burnout Inventory-General Survey (MBI-GS) (Schaufeli, Leiter, Maslach, & Jackson, 1996).

Recent years burnout studies accelerated with intensive use of MBI-GS and apart from studies on employees of almost all professions it is observed that studies on non-occupational samples such as students are widespread (Balogun, Helgemoe, Pellegrini, & Hoerberlein, 1995; Chang, Rand, & Strunk, 2000; Çapri, Gündüz, & Gökçakan, 2011; Çapulcuoğlu & Gündüz, 2012; Gold, Bachelor, & Michael, 1989; Gündüz, Çapri, & Gökçakan, 2012; Fimian, Fastenau, Tashner, & Cross, 1989; Hu & Schaufeli, 2009; Kutsal, 2009; Meier & Schmeck, 1985; Pines, Aronson, & Kafry, 1981; Schaufeli, Martinez, Marques-Pinto, Salanova, & Bakker, 2002a; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002b; Yang, 2004; Yang & Cheng, 2005; Zhang, Gan, & Zhang, 2005). These studies regarded as academic burnout for students was carried out with Maslach Burnout Inventory-Student Survey (MBI-SS), which is developed as an adapted version of MBI-GS by Schaufeli et al. (2002a). Although students are neither employed nor hold jobs; their core activities can be considered as "work" from a psychological perspective (Schaufeli & Taris, 2005). Because this students are involved in structured coercive activities (such as attending classes and doing assignments), which aim toward a specific goal (such as passing exams and acquiring a degree) (Salanova, Schaufeli, Martineza, & Bresó, 2009). Therefore, burnout which is a work related phenomenon may also occur in students (McCarthy, Pretty, & Catano, 1990; Meier & Schmeck, 1985).

Looking at researches about student burnout, it is seen that the vast majority of studies performed on university students (Addis, 2006; Balkis, Duru, Buluş, & Duru, 2011; Bresó, Salanova, & Schaufeli, 2007; Bresó, Schaufeli, & Salanova, 2010; Çapri, Gündüz, & Gökçakan, 2011; Çavuşoğlu, 2009; Divaris, Polychronopoulou, &

Taoufik, 2012; Esteve, 2008; Gündüz, Çapri, & Gökçakan, 2012; Dyrbye, Eacker, & Harper, 2012; Hu & Schaufeli, 2009; Jacobs & Dodd, 2003; Kanji, White, & Ernst, 2006; Kutsal, 2009; Margalit, Glick, Benbassat, Cohen, & Kats, 2005; Ouweneel, Le Blanc, & Schaufeli, 2010; Ören & Türkoğlu, 2006; Pisarik, 2009; Salmela-Aro & Parker, 2011; Schaufeli et al., 2002a, 2002b; Uludağ & Yaratana, 2010; Weckwerth & Flynn, 2006; Yang, 2004; Yılmaz, 2009; Zhang, Gan, & Zhang, 2005; Zhang, Gan, & Cham, 2007), and a small number was performed on high school students (Aypay & Eryılmaz, 2011a, b; Aypay & Sever, 2011; Aypay, 2012; Çapulcuoğlu & Gündüz, 2012; Eker, 2007; Kutsal, 2009; Seçer & Gençdoğan, 2012; Seçer, Halmatov, Veyis, & Ateş, 2013). Also it is found that these studies have mostly a descriptive characteristic and correlated with socio-demographic variables such as gender (Aypay & Sever, 2011; Bresó, Salanova, & Schaufeli, 2007; Çapulcuoğlu & Gündüz, 2012; Çavuşoğlu, 2009; Esteve, 2008; Gündüz, Çapri, & Gökçakan, 2012; Kutsal, 2009; Ören & Türkoğlu, 2006; Seçer & Gençdoğan, 2012; Weckwerth & Flynn, 2006; Yılmaz, 2009), age (Addis, 2006; Kutsal, 2009; Ören & Türkoğlu, 2006; Yılmaz, 2009), school type (Aypay & Sever, 2011; Çapulcuoğlu & Gündüz, 2012; Seçer & Gençdoğan, 2012), number of children (Kutsal, 2009) and academic success (Balkıs, Duru, Buluş, & Duru, 2011; Esteve, 2008; Kutsal, 2009; Schaufeli et al., 2002a; Seçer & Gençdoğan, 2012) and with psychological variables such as social support (Gündüz, Çapri, & Gökçakan, 2012; Jacobs & Dodd, 2003; Kutsal, 2009; Weckwerth & Flynn, 2006; Yang & Cheng, 2005; Zhang, Gan, & Chan, 2005), work/school engagement (Esteve 2008; Schaufeli et al., 2002a; Zhang, Gan, & Zhang, 2005), self-efficacy (Çapri, Özkendir, Özkurt, & Karakuş, 2012; Esteve, 2008), perfectionism (Zhang, Gan, & Cham, 2007), subjective well-being (Aypay & Eryılmaz, 2011a) and motivation (Aypay & Eryılmaz, 2011b; Pisarik, 2009).

On the other hand, from the perspective of experimental studies, it is seen that the studies performed are just on a limited number of university students (Bresó, Schaufeli, & Salanova, 2010; Kanji, White, & Ernst, 2006; Margalit et al., 2005), any experimental studies on the burnout of high school students is not performed. Therefore, this study intended reduction in burnout levels of high school students, who are in a critical period affecting the future and shape the future, is important in terms of being an experimental study previously not studied on high school students. Furthermore, with this study, it is considered that contribution on students' learning to cope with stress and its extreme form burnout feelings can be achieved and can be shed light on studies of prevention and intervention in Psychological Counseling and Guidance Services at schools.

### **Purpose of the Research**

The general purpose of this research is to examine the effect of "Stress Coping Program" to the burnout level of high school students. In the framework of this general purpose answer of following questions were sought:

1. Is there a significant effect of Stress Coping Program on burnout level of high school students?
2. Is long-term a decline on burnout levels of high school students?

### **METHOD**

This research is designed in accordance with the experimental research model with Pre-test and Post-test Control Group.

### **Research Group**

The research group is selected among a total of 30 students who study at Şevket Pozcu High School in 2011-2012 educational year and have a score of above 1 standard deviation of sub-scale mean scores of exhaustion and depersonalization which are the main dimensions of MBI-SS (Maslach, Schaufeli, & Leiter, 2001; Schaufeli & Taris, 2005). A Pre-interview performed on these students and they have been invented to participate in this research. After pre-interviews 20 students, who voluntarily agreed to join the study, are assigned into two groups randomly withdraw method as experimental and placebo control. It is considered to show similar features in terms of gender, age, educational level of parents, number of siblings and family income for selection of students in experimental and placebo control groups.

## Measures

**Personal Information Form:** Personal Information Form is developed by researchers in order to collect data for the independent variables of the research. In this form there are statements to collect details such as gender, age, grade levels of students.

**Maslach Burnout Inventory-Student Survey (MBI-SS):** The inventory MBI-GS, developed by Schaufeli et al. (1996), adapted by Schaufeli et al. (2002a) in order to use on students is a 7-point Likert-type scale consists of 16 items and three sub-scales. Exhaustion [*exhaustion*, EX] sub-scale is composed of 5 items, cynicism [cynicism, CY] sub-scale is composed of 5 items and efficacy [efficacy, EF] sub-scale is composed of totally 6 items. Scale items are scored on a 7-point frequency rating scale ranging from 0 (*never*) to 6 (*always*). As a result of confirmatory factor analysis of the scale, which is adapted to Turkish language by Çapri, Gündüz, & Gökçakan (2011), three-factor structure consisting 13 items was obtained. It is determined that correlations between the points of the sub-scales obtained from the scale are ranged between 0,32 and 0,83; item total test correlations are ranged between .32 and .69. In the criterion-related validity study of MBI-SS, Burnout Measure Short Version (BM-SV) is applied and correlations between the total score of this scale and sub scales of MBI-SS are found respectively as .51, .45 and -.38. Cronbach Alfa co-efficient of internal consistency, calculated to determine the reliability of the scale, is found respectively as .76, .82 and .61, test-retest test reliability results are found respectively as .76, .74 and .73. Ergin (1992) adapted the Maslach Burnout Inventory (MBI) to Turkish language which is previously developed by Maslach & Jackson (1981) for profession group working with people face to face stated that 7-rating format does not comply with the Turkish culture. Therefore, 5-rating format is accepted for this adaptation (never, sometimes, often, generally, always) study. High scores on EX and CY and low scores on EF (reverse scored) are indicative for burnout. Three separate burnout score is calculated per each person for scoring.

## Procedure

In the first stage obtained from the means of measurement applied to students in the experimental and placebo control groups by researcher, was discussed as pretest. Data; obtained from collectively reimplementation of means of measurement to experimental and placebo groups after a 15-minute break when their last session is finished, was discussed as post-test. For avoidance of confounding to research results, students were not informed about whether they are in the experimental or placebo control group. Totally 8 sessions of Stress Coping Program were applied to the experimental group 1 times a week for 8 weeks duration and each session lasting 90 minutes. Placebo control group was applied a program of totally 8 sessions for 8 weeks duration 1 times a week, each session lasting 90 minutes. Furthermore, re-applied to experimental and placebo groups after the end of the experiment, for determination of the long-lasting effects of the program whether continuing or not.

## Data Analysis

For data analysis, the one-factor covariance analysis (ANCOVA) was used in order to examine the significance of difference between pretest and posttest scores of experimental and placebo control groups. One-factor covariance analysis is a powerful technique by enabling another variable or variables, called as covariant variable and in association with the dependent variable other than the independent variable those effect is tested in the research, to be statistically controlled, and allowing comparison between groups (Büyükoztürk, 2001). All numerals required to apply one-factor covariance analysis; stated as the scores of dependent variable show a normal distribution in each group ( $W_{exhaustion}=.955, p=.443$ ;  $W_{cynicism}=.914, p=.076$ ), variances of scores of groups for dependent variable to be equivalent (Levene Test-  $F_{exhaustion}=.108, p=.746$ ;  $F_{cynicism}=3.683, p=.071$ ), to have a linear relationship between pretest and posttest scores of the subjects participated in the research and the regression coefficients use to estimate posttest statistical scores of groups according to pretest to be equal (Büyükoztürk, 2001), were observed to be met. On the other hand, in order to determine whether the posttest scores of the experimental group and following up test scores differentiate or not, for the dependent groups t test is used if scores distribute normally, Wilcoxon signed rank test was used if

scores does not distribute normally. The significance level was taken as 0.05 in the interpretation of the collected data with SPSS 17.0 statistical program.

### Application

In the research, the Stress Coping Program developed by Çoban & Hamamcı (2008) was applied to the experimental group in order to test the effect on levels of burnout of students. Techniques used in cognitive-behavioral approach is located on the basis of the program prepared by Çoban & Hamamcı (2008) on the basis of techniques located in Cognitive Behavioral Training Program of Coping With Stress developed by Gaab, Blattler, Menzi, Pabst, & Stoyer (2003). The main purpose of the Stress Coping Program is, group members to be informed about stress responses and their results, to get aware of stressful conditions and events in their own lives, to learn the proper techniques of coping with stress, to provide support to each other with their group mates by sharing techniques of solving problems used by their owns and to get aware of the negative thoughts prevent to cope with stress and convert them to positive. Techniques such as provide information, discussion, problem solving, modeling, role playing and homework are used in the program. In this program each session takes approximately 90 minutes, in which provided both didactical information as well as structured exercises applied. The program prepared by Çoban & Hamamcı (2008) consisting of 10 sessions on the basis. However not to divide coinciding in the semester break and also because the sessions are available to combine, it is applied as session numbers decreased to 8. Targets intended to be gained by group members are given below in order of each session number:

In the first session; providing group members to be informed about general purpose and content of the program,

In the second session, determining the targets they want to achieve in the group period, informing about "General Adaptation Syndrome" and its phrases and stress responses, providing to make awareness about different and similar aspects of stress responses,

In the third session, determining stress levels of group members, providing to get aware of events and conditions causes stress in their own lives, providing them to gain awareness about negative effects caused by stress in their lives,

In the fourth session, providing to get aware of effective and non-effective coping strategies used by group members, providing to be informed about healthy methods used for coping with stress,

In the fifth session, providing reducing effects of stress as a result of introducing methods for body, teaching proper breathing techniques and muscle relaxation methods,

In the sixth session, providing the group members to relax themselves in stressful situations by teaching them conditioning and imagination,

In the seventh session, to provide group members to be able to recognize stressful events or situations they experienced, to learn the strategies of cognitive coping and problem solving needed for coping with stressful situations as determining the most urgent and solution expecting stressful situation in their lives, to gain ability to cope with negative thoughts which cause stress or enable to cope with it,

Finally in the eighth session, to teach the group members' abilities to divert attention and to stop thinking which are one of the abilities of cognitive coping with stress, by discussing knowledge and skills acquired during the program, provide them to evaluate the effectiveness of programmes to reduce their stress.

Activities which are not related to subject of the research such as watching film, listening music, telling jokes, playing games are applied to placebo control group of the study in 8 sessions consisting of 90 minutes.

## FINDINGS

In this session, findings according to sub problems of the research are given.

### Findings Regarding the First Sub Problem of the Research

The first sub problem of the research is stated as “There will be a reduction on burnout levels of high school students applied the Stress Coping Program according to burn out levels of placebo control group students who were not applied this program”. Findings related to exhaustion and cynicism the sub scales of MBI-SS pretest and posttest scores are respectively presented below.

### Findings Related to Exhaustion Subscale of MBI-SS Pretest and Posttest Scores

N, average, standard deviation and posttest average corrected according to pretest, standard error values of pretest and posttest scores of exhaustion subscale of MBI-SS are given in Table 1.

Table 1: N, Average, Standard Deviation and Posttest Average Corrected According to Pretest, Standard Error Values of Pretest and Posttest Scores of Exhaustion Subscale of Experimental and Placebo Control Groups

	N	Pretest		Posttest		Posttest Corrected Scores	
		$\bar{X}$	Ss	$\bar{X}$	Ss	$\bar{X}$	Sh
Experimental Group	10	17.60	3.43	13.10	4.35	13.17	1.14
Placebo Control Group	10	17.92	1.94	17.80	2.93	17.73	1.14

As seen in Table 1, while exhaustion average scores of subjects in experimental groups before “Stress Coping Program” was 17.60, after “Stress Coping Programs” this value became as pretest average scores 13.10; corrected posttest average scores were 13.17. While exhaustion average scores of subjects in placebo control group before “Placebo Program” was 17.92, after “Placebo Program” posttest average scores were 17.80; corrected posttest average scores were found 17.73. In this case, considering the average scores, it can be said that decline on the exhaustion levels of subjects of experimental group participated in “Stress Coping Program” was observed regarding placebo control group.

Results of one-factor covariance analysis (ANCOVA) regarding whether changes showing a significant difference or not; which are observed after the program compared to Stress Coping Program, in the exhaustion levels of subjects in the experimental and placebo control groups exposed to two different experimental processes, are given in Table 2.

Table 2: Results of Covariance Analysis (ANCOVA) For Exhaustion Subscale Pretest-Posttest Scores

Source of Variance	Sum of Squares	df	Average of Squares	F	p
Model	136.290	2	68.145	5.203	.017
Variable Controlled (Exhaustion Pretest)	25.840	1	25.840	1.973	.178
Main Effect of Grouping	103.563	1	103.563	7.907	.012
Error	222.660	17	13.098		
Sum	358.950	19			

As seen in Table 2, difference between total scores of posttest corrected according to pretest scores of exhaustion scores of experimental and placebo control groups is found statistically significant ( $F=7.907$ ,  $p<.012$ ). This finding shows that the experimental treatment applied causes a significant decrease in exhaustion scores of subjects.

#### Findings Related Cynicism Subscale of MBI-SS Pretest and Posttest Scores

N, average, standard deviation and posttest average corrected according to pretest, standard error values of pretest and posttest scores of cynicism subscale of MBI-SS are given in Table 3.

Table 3: N, Average, Standard Deviation and Posttest Average Corrected According to Pretest, Standard Error Values of Pretest and Posttest Scores of Cynicism Subscale of Experimental and Placebo Control Groups

	N	Pretest		Posttest		Posttest Corrected Scores	
		$\bar{X}$	Ss	$\bar{X}$	Ss	$\bar{X}$	Sh
Experimental Group	10	10.60	3.37	7.80	1.87	8.11	.68
Placebo Control Group	10	12.60	3.20	11.10	2.64	10.78	.68

As seen in Table 3, while cynicism average scores of subjects in experimental groups before “Stress Coping Program” was 10.60, after “Stress Coping Programs” this value became as pretest average scores 7.80; corrected posttest average scores were 8.11. While exhaustion average scores of subjects in placebo control group before “Placebo Program” was 12.60, after “Placebo Program” posttest average scores were 11.10; corrected posttest average scores were found 10.78. In this case, considering the average scores, it can be said that decline on the cynicism levels of subjects of experimental group participated in “Stress Coping Program” was observed regarding placebo control group.

Results of one-factor covariance analysis (ANCOVA) regarding whether changes showing a significant difference or not; which are observed after the program compared to Stress Coping Program, in the cynicism levels of subjects in the experimental and placebo control groups exposed to two different experimental processes, are given in Table 4.

Table 4: Results of Covariance Analysis (ANCOVA) For Cynicism Subscale Pretest-Posttest Scores

Source of Variance	Sum of Squares	df	Average of Squares	F	p
Model	73.302	2	36.651	8.236	.003
Variable Controlled (Cynicism Pretest)	18.852	1	18.852	4.237	.055
Main Effect of Grouping	32.515	1	32.515	7.307	.015
Error	75.648	17	4.450		
Sum	148.950	19			

As seen in Table 4, difference between total scores of posttest corrected according to pretest scores of cynicism scores of experimental and placebo control groups is found statistically significant ( $F=7.307$ ,  $p<.015$ ). This finding shows that the experimental treatment applied causes a significant decline in cynicism scores of subjects.

#### Findings Regarding the Second Sub Problem of the Research

The second sub problem of the research is stated as “Decline in burnout levels of high school students who are applying stress coping program will be long lasting”. In order to test this sub problem of research difference between scores of posttest and following up tests of exhaustion and cynicism for subjects of experimental groups are examined. For this reason, 1 and 2 months after posttest, following up tests were applied and it is examined if there is difference between posttest and following up test scores of subjects.

### Findings Related Scores of Posttest and Following up (1 and 2 Months) Tests of Exhaustion Subscale of MBI-SS for Experimental Group

For determining whether a significant difference in exhaustion scores of subjects of experimental group occurred in time, in order to define which test would be used, Shapiro Wilk Normality Test was performed on data of exhaustion posttest and following tests (1 and 2 months) of experimental group and because data of exhaustion posttest and following up (1 and 2 months) tests for experimental groups were not seen normal in results of analysis ( $W_{\text{posttest}} = .791$ ,  $p = .011$ ;  $W_{\text{following up1 test}} = .857$ ,  $p = .070$ ;  $W_{\text{following up2 test}} = .812$ ,  $p = .020$ ) Wilcoxon signed ranks test was used.

Test Results of Wilcoxon Signed Ranks, which is applied to determine if there is difference between posttest scores of subjects in experimental group from exhaustion subscale and following up test (1 and 2 months) score averages, are given in Table 5.

Table 5: Wilcoxon Signed Ranks Test Results for Subjects in Experimental Group

	Posttest-Following up Test (1 Month)	N	Rank Average	Rank Total	z	p
1. Following up	Negative Rank	6	6.83	41.00	-1.383*	.167
	Positive Rank	4	3.50	14.00		
	Equal	0	-	-		
	Posttest- Following up Test (2 Months)	N	Rank Average	Rank Total	z	p
2. Following up	Negative Rank	7	6.29	44.00	-1.688*	.091
	Positive Rank	3	3.67	11.00		
	Equal	0	-	-		

\* Based on Negative ranks

According to the results of the Wilcoxon Signed Ranks Test is given in Table 5, it is seen that there is no significant difference between exhaustion subscale posttest scores of subjects in the experimental group and scores of 1 month ( $z = -1.383$ ,  $p > 0.05$ ) and 2 months ( $z = -1.688$ ,  $p > 0.05$ ) after the end of "Stress Coping Program". Based on these results, it can be said that the effect of "Stress Coping Program" to reduce the exhaustion levels continues in following up studies performed 1 month later.

### Findings Related Scores of Posttest and Following up (1 and 2 Months) Tests of Cynicism Subscale of MBI-SS for Experimental Group

For determining whether a significant difference in cynicism scores of subjects of experimental group occurred in time, in order to define which test would be used, Shapiro Wilk Normality Test was performed on data of cynicism posttest and following up tests (1 and 2 months) of the experimental group and t test was used because the data of cynicism posttest and following up (1 and 2 months) tests for experimental groups were seen normal in results of analysis ( $W_{\text{posttest}} = .858$ ,  $p = .072$ ;  $W_{\text{following up1 test}} = .951$ ,  $p = .680$ ;  $W_{\text{following up2 test}} = .924$ ,  $p = .388$ ).

Test Results of t Test, which is applied to determine if there is difference between posttest scores of subjects in experimental group from cynicism subscale and following up test (1 and 2 months) score averages, are given in Table 6.



Table 6: t Test Results for Subjects in Experimental Group

1. Following up	Tests	N	$\bar{X}$	Ss	t	p
	Posttest	10	8.30	2.00	-.375	.716*
	Following up Test (1 Month)	10	8.50	2.01		
2. Following up	Posttest	10	8.30	2.00	-1.500	.168*
	Following up Test (2 Months)	10	8.90	2.28		

p>.05

According to results of t Test given in Table 6, it is seen that there is no significant difference between cynicism subscale posttest scores of subjects in the experimental group and scores of 1 month ( $t = -.375$ ,  $p > 0.05$ ) and 2 months ( $t = -1.500$ ,  $p > 0.05$ ) after the end of "Stress Coping Program". Based on these results, it can be said that the effect of "Stress Coping Program" to reduce the cynicism levels continues in following up studies performed 1 month and 2 months later.

## DISCUSSION AND INTERPRETATION

The findings of the research were discussed and interpreted in this section.

### Discussion and Interpretation of Findings of the First Sub Problem of the Research

By the results of this research it is seen that "Stress Coping Program" application performed on experimental group has a significant effect on the reduction of exhaustion and cynicism scores of students in the experimental group. It can be said that methods of coping with stress are in the second rank predicted variable, there is negative correlation between burnout and the using positive coping methods, and there is a positive correlation between burnout and negative coping methods (Çapulcuoğlu & Gündüz, 2012). When considered that Stress Coping Program is a program concluding teaching positive coping behaviors, findings support the reviews of Çapulcuoğlu & Gündüz (2012).

It is seen in the literature that very few experimental studies are performed about student burnout. It can be seen that performed studies are about university students and no experimental studies about high school students are performed. Looking at experimental studies about university students; Bresó, Schaufeli, & Salanova (2010) made a half experimental study in order to test the hypothesis that personal-achievement oriented intervention program would decrease burnout of university students and increase engagement and improve performance or not and reported that they have seen decrease of burnout scores. It is considered that the decrease of burnout in experimental group supports the findings obtained for the first sub problem of this research. On the other hand, Margalit et al. (2005) have found that internal burnout is increased after program as a result of their studies on effects of 2 education programs on students' bio-psychosocial knowledge, management intentions, patient-oriented attitude, professional self esteem, burnout, tension and effect on related job by mental workload. Similarly, Kanji, White, & Ernst (2006) in their research which they applied autogenic training (a relaxation technique consisting of 6 mental exercises used for relieving stress, tension and anger) on nursing student for reducing anxiety, they couldn't find a difference according to results of Maslach Burnout Inventory between the groups formed. In this case, it is considered that the summarized research findings differentiate from the findings of the first sub problem of the research.

On the other hand, since experimental studies on student burnout are very few, researches performed on burnout of other professions are also reviewed. When these are reviewed, Rowe (2000) applying Stress Coping Program on mental health professionals, has observed decrease in exhaustion score, increase in reduced personal accomplishment score, Gorter, Eijkman, & Hoogstraten (2001) have seen that career counseling program decreases emotional exhaustion scores of dentists and increases reduced personal accomplishment scores. Similarly, Ewers, Bradshaw, McGovern, & Ewers (2002) as a result of their research that they have

applied psychosocial treatment program to nurses, they have found decrease in emotional exhaustion and depersonalization, increase in reduced personal accomplishment. Additionally, Cheek, Bradley, Parr, & Lan (2003) have applied musical therapy on primary school teachers and reported that they have seen decrease of cynicism score. Hayes, Bissett, Roget, Padilla, Kohlenberg, Fisher et al. (2004) have provided "Acceptance and Determination Training" for a group oriented on reducing labeling and prejudice of substance abuse counselors against users of pills, and provided "Multicultural Training" for other group. They have revealed that Multicultural Training is effective immediately after training on labeling attitudes and burnout. Innstrand, Espnes, & Mykletun (2004) have attempted to examine effects of different intervention approaches on stress, burnout and job satisfaction of staff working with mentally disabled persons in 2 different municipalities in Norway. After treatment they have seen decrease in burnout and stress levels of experimental group. In the other study, Zołnierczyk-Zreda (2005) applied 2-days burnout intervention program in order to increase coping with stress observed in business of teachers, and significant decrease in the intervention group of emotional exhaustion, perceived workload and somatic complaints. Similarly, Çoban & Demir (2007) as a result of their studies that they applied "Structured Peer Counselor Program" on psychological counselors at school, they have seen a significant decrease in scores of emotional exhaustion and cynicism and significant increase of reduced personal accomplishment subscale scores. On the other hand, Akgün-Çıtak (2006) applied conflict resolution skills training on nurses working in intensive care units and after training they have found that score averages of emotional exhaustion subscale are significantly lower. Further although there is decline in depersonalization subscale, increase in personal achievement subscale they reported that the results are not found significant. Le Blanc, Hox, Schaufeli, Taris, & Peeters (2007) who performed a similar study on oncology professionals, as a result of their research which they applied cognitive behavioral therapy, communication, social support and coping skills they have seen decrease in emotional exhaustion and cynicism. Bilgin & Gözüm (2009) made interactive application on mothers who have mentally disabled children one hour per week and additionally given an educational booklet. They have found that educated mothers have lower burnout scores than mothers who weren't educated. All summarized research findings are considered to show parallelism with findings obtained for the first sub problem of this research.

Further Palsson, Hallberg, Norberg, & Björvell (1996) examined the effect of systematic clinical supervision on burnout, empathy, sense of coherence and personality traits in their research and found in the results obtained for control group (21 people) and comparison group (12 people) systematic clinical supervision has no significant effect on burnout, empathy and sense of coherence. Similarly, İkiz (2006) in the results obtained from their study performed to determine Basic Counseling Skills Training course effect levels of burnout, empathetic skills and empathetic tendency of psychological counselors or not, they have reported that emotional exhaustion score averages of psychological counselors significantly increased after course and they experienced emotionally more feeling of burnout after the course. Results obtained from these two researches, differs from results obtained for the first sub problem of this research.

#### **Discussion and Interpretation of Findings of the Second Sub Problem of the Research**

The second sub problem of research is stated as "Decrease in burnout levels of high school students who are applying Stress Coping Program shall be Long Lasting". According to scores of exhaustion and cynicism of the subjects in the experimental group, it is seen that there is no significant differences between posttests and following up (1–2 Month) measurements. This case shows that intervention continues its effect at the end of both 1 month and 2 months and supports the sub problem of decrease in burnout levels of high school students who were applied the "Stress Coping Program" shall be Long Lasting.

When searched for experimentally studied researches to examine whether burnout has long lasting effects, any following up study could be found about student burnout. When seen in experimental researches on other professions about burnout; Rowe (2000) has studied the effect of Stress Coping Program on burnout and has seen that there is a stable long lasting decline in burnout. Similarly, Van Rhenen, Blonk, Van der Klink, Van Dijk, & Schaufeli (2005) have applied intervention programs, one is a cognitive-oriented and other is a newly developed combining physical exercise and relaxation, in order to see short- and long-term effects of stress management program and they have found that both two interventions have positive effects on burnout in the long term. Le Blanc et al. (2007) have examined the effects of a team-based burnout intervention program

combining a staff group with a participant action research approach. Both immediately after the program and as well as 6 months after the end of the program the subjects significantly reported that they are experiencing less emotional exhaustion. Also Rø, Gude, Tyssen, & Aasland (2008) in their studies on 227 doctors, have carried out a 1-day individual or 1-week group counseling session for acceptance and motivation of the status of doctors and personal needs. They have seen a significant reduction in doctor's level of exhaustion for a long period in the results obtained. In another study examining studies related burnout intervention Awa, Plaumann, & Walter (2009) have reviewed totally 25 intervention studies and reported that % 80 of these programs are effective on reducing burnout. They also found that individual interventions reduce burnout in short-term (6 months and less), both individual and institutional interventions reduce burnout in long-term (12 months and more). It is considered that all research findings summarized support the findings obtained for the first sub problem of this research. On the other hand, in the half experimental study of Ossenbaad (2000) effect of relaxation method is examined with Alfa and Beta brain machines on anxiety and burnout of 42 staff working in addiction clinic. Results in this study about relaxation method has no long-term effect on burnout, performed by Alfa and Beta brain machines, considered to differ from the results obtained from the second sub problem of this research.

### CONCLUSION AND SUGGESTIONS

In this research, the effect of "Stress Coping Program" performed in 8 sessions, on burnout levels of high school students was examined. Considering the results of research, it is seen that there is no significant difference in exhaustion and cynicism pretest scores of MBI-SS between experimental and placebo groups, there is a significant difference between pretest and posttest scores in exhaustion and cynicism of experimental group, there is no significant difference between pretest and posttest scores of placebo control group in exhaustion and cynicism. Regarding these results, it can be expressed that a change observed in exhaustion and cynicism scores of subjects participated in "Stress Coping Program" compared to the scores before experimental process and a decrease in burnout scores of subjects taken "Stress Coping Program".

On the other hand, it is observed that there is no significant difference between the posttest scores of subjects in the experimental group in burnout and cynicism and scores in 1 and 2 months after the end of "Stress Coping Program". In this case, it can be said that the effect of "Stress Coping Program" on decreasing the burnout and cynicism scores of subjects is lasting in the following up studies performed after 1 and 2 months.

In light of the results of this study the following suggestions can be given to researchers and practitioners who will be working on this issue:

1. Psychological counselors working in the counseling and guidance services of schools may apply "Stress Coping Program" in their schools for prevention of burnout.
2. As well as studies, similar to this one performed in general public high schools, can be performed in different types of high schools such as Science High Schools, Anatolian High Schools, Anatolian Teacher High Schools, Social Sciences High Schools, Vocational High Schools, similar researches can be performed on primary school, secondary school, university students and even on employees of different professions.
3. 1 and 2 months following up measurements are used in Stress Coping Program. These following up measurements can be increased to longer periods.
4. Although original "Stress Coping Program" consists of 10 sessions, in this research it is applied as 8 sessions. The effect of 10 session program can be tested both in similar sample groups as well as sample groups with different features.
5. In this research only exhaustion and cynicism subscales are used which expressed to be basic dimensions of MBI-SS. In new researches effect of "Stress Coping Program" on groups, formed according to the scores obtained from efficacy subscale which is 3<sup>rd</sup> dimension of MBI-SS, can be examined in more detail.

6. Student burnout is a problem which administrators, teachers and school counselors may face at schools with a maximum possibility and which is intensively searched in recent years. Therefore, without experiencing more negative consequences, taking into account the principle of preventive guidance, individual and group works in order to prevent student burnout may be importantly included at schools.

7. Burnout is now not only a syndrome in workers, but also in students and parents who are in couple. Individuals who have different roles such as student, mother, father, couple, teacher, and administrator have a high possibility to face with this problem both at home and family environment as well as in business and working environments. Therefore, educations may be provided to teach how to cope with this syndrome at home and in business environments of individuals with different roles.

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## REFERENCES

- Addis, R. S. (2006). *Burnout among undergraduates athletic training students*. Dissertation. California University, U.S.A.
- Akgün-Çıtak, E. (2006). *Çatışma çözümü eğitimin eğitiminin hemşirelerin çatışma çözüm becerisi yöntem ve tükenmişliğine düzeyine etkisinin incelenmesi*. Yayımlanmamış doktora tezi, Ege Üniversitesi Sağlık Bilimleri Enstitüsü, İzmir.
- Awa, W. L., Plaumann, M., & Walter, U. (2009). Burnout prevention: A review of intervention programs. *Patient Education and Counselling*, 78, 2, 184-190.
- Aypay, A. & Eryılmaz, A. (2011a). Relationships of high school student' subjective well-being and school burnout. *International Online Journal of Educational Sciences*, 3 (1), 181-199.
- Aypay, A. & Eryılmaz, A. (2011b). Lise öğrencilerinin derse katılmaya motive olmaları ile okul tükenmişliği arasındaki ilişkinin incelenmesi. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi*, 11 (21), 26-44.
- Aypay, A. & Sever, M. (2011). *Ortaöğretim öğrencilerinde okul tükenmişliğinin bazı değişkenler açısından incelenmesi*. XI. Ulusal Psikolojik Danışmanlık ve Rehberlik Kongresi Bildiri Kitabıçığı.
- Aypay, A. (2012). Ortaöğretim okul tükenmişliği ölçeği (OÖTÖ). *Eğitim ve Bilim*, 12 (2), 782-787.
- Balkıs, M., Duru, E., Buluş, M., & Duru, S. (2011). Tükenmişliğin öğretmen adayları arasındaki yaygınlığı, demografik değişkenler ve akademik başarı ile ilişkisi. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 29 (1), 151-165.
- Balogun, J. A., Helgemoe, S., Pellegrini, E., & Hoerberlein, T. (1995). Test-retest reliability of a psychometric instrument designed to measure physical therapy students burnout. *Perceptual and Motor Skills*, 81, 667-672.
- Baltaş, A. & Baltaş, Z. (1985). *Stresle başa çıkma program ve tekniklerinin uygulama değerleri*, II. Ulusal Psikoloji Kongresi Bilimsel Çalışmaları, Ankara: Psikologlar Derneği Yayınları, 182-183.
- Bilgin, S. & Gözüm, S. (2009). Reducing burnout in mothers with an intellectually disabled child: an education programme. *Journal of Advanced Nursing*, 65 (12), 2552-2561.
- Breso, E., Salanova, M., & Schaufeli, W. B. (2007). In search third dimension of burnout: Efficacy or inefficacy? *Applied Psychology: An International Review*, 56 (3), 460-478.
- Breso, E., Schaufeli, W. B., & Salanova (2010). Can a self-efficacy-based intervention decrease burnout, increase engagement, and enhance performance? A quasi-experimental study. *Higher Education*, 61, 339-355.
- Büyüköztürk, Ş. (2001). *Deneysel desenler: Öntest-sontest kontrol grubu desen ve veri analizi*. Ankara: Pegem A Yayıncılık.
- Chang, E., Rand, K. L., & Strunk, D. R. (2000). Optimism and risk for job burnout among working college students. *Personality and Individual Differences*, 29, 255-263.
- Cheek, J. R., Bradley, L. J., Parr, G., & Lan, W. (2003). Using music therapy techniques to treat teacher burnout. *Journal of Mental Health Counseling*, 25 (3), 204-217.

Çapri, B., Gündüz, B., & Gökçakan, Z. (2011). Maslach tükenmişlik envanteri-öğrenci formu'nun (Mte-Öf) Türkçe'ye uyarlaması: Geçerlik ve güvenilirlik çalışması. *Çukurova Üniversitesi Eğitim Fakültesi Dergisi*, 1 (40), 134-147.

Çapri, B., Özkendir, O. M., Özkurt, B., & Karakuş, F. (2012). Investigation of pre-service teachers' attitudes towards physics lesson and self-efficacy beliefs according to their gender, departments and perceived success in physics. *Procedia - Social and Behavioral Sciences*, 47, 1034-1039.

Çapulcuoğlu, U. & Gündüz, B. (2012). Lise öğrencilerinde tükenmişliğin cinsiyet, sınıf düzeyi, okul türü ve algılanan akademik başarı değişkenlerine göre incelenmesi. *Trakya University Journal of Education*, 3, 1, 12-24.

Çavuşoğlu, İ. (2009). *Sınıf öğretmenliği son sınıf öğretmen adaylarının tükenmişlik düzeylerinin incelenmesi*. Yayımlanmamış Yüksek Lisans Tezi, Çukurova Üniversitesi Sosyal Bilimler Enstitüsü, Adana.

Çoban, A. E. & Demir, A. (2007). The Effect of structured peer consultation program on school counselor burnout in Turkey. *Journal of Applied Sciences*, 7 (23), 3774-3779.

Çoban, A. E. & Hamamcı, Z. (2008). Stresle başa çıkma programının psikolojik danışmanların mesleki tükenmişlik düzeyleri üzerine etkisi. *Elementary Education Online*, 7 (3), 600-613.

Divaris, K., Polychronopoulou, A., & Taoufik, K. (2012). Stress and burnout in postgraduate dental education. *European Journal of Dental Education*, 16 (1), 35-42.

Dyrbyre, L. N., Eacker, A. M., & Harper, W. (2012). Distress and empathy do not drive changes in specialty preference among US medical students. *Medical Teacher*, 34 (2), 116-122.

Eker, G. (2007). *Endüstri meslek lisesi öğrencilerinin tükenmişlik düzeyleri*. Yayımlanmamış Yüksek Lisans Tezi. Marmara Üniversitesi Fen Bilimleri Enstitüsü, İstanbul.

Esteve, E. B. (2008). *Well-being and performance in academic settings. The predicting role of self-efficacy*. Universitat Jaume I. Dissertation.

Ewers, P., Bradshaw, T., McGovern, J., & Ewers, B., (2002). Does training in psychosocial interventions reduce burnout rates in forensic nurses. *Journal of Advanced Nursing*, 27, 470-476.

Farber, B. A. (1984). Stress and burnout in suburban teachers. *Journal of Educational Research*, 77, 325-331.

Fimian, M. J., Fastenau, P. A., Tashner, J. H., & Cross, A. H. (1989). The measure of classroom stress and burnout among gifted and talented students. *Psychology in the Schools*, 26, 139-153.

Freudenberger, N. J. (1974). Staff burnout. *Journal of Social Issues*, 30, 159-165.

Gaab, N., Blattler, T., Menzi, B., Pabst, S., & Stoyer, U. (2003). Randomized controlled evaluation of the effects of cognitive-behavioural stress management on responses to acute stress in healthy subjects, *Psychoneuroendocrinology*, 28, 767-779.

Gold, Y., Bachelor, P., & Michael, W. B. (1989). The dimensionality of a modified form of the Maslach burnout inventory for university students in a teacher-training program. *Educational and Psychological Measurement*, 49, 549-561.

Gorter, R. C., Eijkman, M. A. J., & Hoogstraten, J. A. (2001). A career counselling program for dentists: Effects on burnout. *Patient Education and Counseling*, 43, 23-30.

- Greene, G. (1961). *A Burnt-Out Case*. Viking Press, p.248.
- Gündüz, B., Çapri B., & Gökçakan Z. (2012). Üniversite öğrencilerinin tükenmişlik düzeylerinin incelenmesi. *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi*, 19, 38-55.
- Güner, A. (2006). *Lise öğrencilerinde stres başa çıkma ve dini başa çıkma*. Yüksek Lisans Tezi. Sakarya Üniversitesi Sosyal Bilimler Enstitüsü, Sakarya.
- Hayes, S. C., Bissett, R., Roget, N., Padilla, C., Kohlenberg B. S., Fisher, G., et al. (2004). The impact of acceptance and commitment training and multicultural training on the stigmatizing attitudes and professional burnout of substance abuse counselors. *Behavior Therapy*, 35, 821-835.
- Hu, Q. & Schaufeli, W. B. (2009). The factorial validity of the Maslach Burnout Inventory-student survey in China. *Psychological Reports*, 105, 394-408.
- Innstrand, S. T., Espnes, G. A., & Mykletun, R. (2004). Job stress, burnout and job satisfaction: an intervention study for staff working with people with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities*, 17, 119-26.
- İkiz, F. E. (2006). *Danışma becerileri eğitiminin danışmanların empatik eğilim, empatik beceri ve tükenmişlik düzeyleri üzerindeki etkisi*. Yayınlanmamış Doktora Tezi, Dokuz Eylül Üniversitesi Eğitim Bilimleri Enstitüsü, İzmir.
- Jacobs, S. R. & Dodd, D. (2003). Student burnout as a function of personality, social support and workload. *Journal of College Student Development*, 44 (3), 291- 303.
- Kanji, N., White, A. R., & Ernst, E. (2006) Autogenic training to reduce anxiety in nursing students: Randomized controlled trial. *Journal of Advanced Nursing*, 53, 729-735.
- Kavla, İ. (1998). *Hemşirelerde iş doyumu ile tükenmişlik ilişkisi*. Yayınlanmamış Yüksek Lisans Tezi. Dokuz Eylül Üniversitesi Sağlık Bilimleri Enstitüsü, İzmir.
- Kutsal D. (2009). *Lise öğrencilerinin tükenmişliklerinin incelenmesi*. Yayınlanmamış Yüksek Lisans Tezi, Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü, Ankara.
- Le Blanc, P. M., Hox, J. J., Schaufeli, W. B., Taris, T. W., & Peeters, M. C. W. (2007). Take care! The evaluation of a team-based burnout intervention program for oncology care providers. *Journal of Applied Psychology*, 92, 213-227.
- Margalit, A. P., Glick, S. M., Benbassat, J., Cohen, A., & Kats, M. (2005). Promoting a biopsychosocial orientation in family practice: effect of two teaching programs on the knowledge and attitudes of practising primary care physicians. *Medical Teacher*, 27, 613-618.
- Maslach, C. & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behaviour*, 2 (2), 99-113.
- Maslach, C. & Leiter, M. P. (1997). *The truth about burnout*. San Francisco, CA: Jossey-Bass.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review Psychology*, 52, 397- 422.
- McCarthy, M. E., Pretty, G. M., & Catano, V. (1990). Psychological sense of community and student burnout. *Journal of College Student Development*, 31, 211-216.

Meier, S. T. & Schmeck, R. R. (1985). The burned-out college student: A descriptive profile. *Journal of College Student Personnel*, 25, 63-69.

Ossenbaad, H. C. (2000). Stress reduction by technology? An experimental study into the effects of brain machines on burnout and state anxiety. *Applied Psychophysiology and Biofeedback*, 25, 93-101.

Ouweneel, E., Le Blanc, P. M. ve Schaufeli, W. B. (2010). Flourishing students: A longitudinal study on positive emotions, personal resources, and study engagement. *The Journal of Positive Psychology*, 6, 2, 142-153.

Ören, N. & Türkoğlu, H. (2006). Öğretmen adaylarında tükenmişlik. *Muğla Üniversitesi Sosyal Bilimler Enstitüsü Dergisi (İlke)*, 16.

Palsson, M., Hallberg, I. R., Norberg, A., & Bjorvell, H. (1996). Burnout empathy and sense of coherence among Swedish District Nurses before and after systematic clinical supervision. *Scandinavian Journal of Caring Science*, 10, 19-26.

Pines, A. M., Aronson, E., & Kafry D. (1981). *Burnout: From tedium to personal growth*. New York: The Free Press.

Pisarik, C. (2009). Motivational orientation and burnout among undergraduate college students. *College Student Journal*, 43 (4), 12-38.

Rø, K. E. I., Gude, T., Tyssen, R., & Aasland, O. G. (2008). Counselling for burnout in Norwegian doctors: One year cohort study. *British Medical Journal*, 337, 1146-1149.

Rowe, M. M. (2000). Skills training in the long-term management of stress and occupational burnout. *Current Psychology*, 19, 215-28.

Salanova, M., Schaufeli, W. B., Martinez, I., & Bresó, E. (2009). How obstacles and facilitators predict academic performance: the mediating role of study burnout and engagement. *Anxiety, Stress ve Coping*, 1-18.

Salmela-Aro, K. & Parker, P. D. (2011). Developmental processes in school burnout: A comparison of major developmental models. *Learning and Individual Differences*, 21, 244-248.

Schaufeli, W.B., Leiter, M.P., Maslach, C., & Jackson, S.E. (1996). The Maslach Burnout Inventory-General Survey. *Palo Alto, CA: Consulting Psychologists Press*.

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

Schaufeli, W.B., Salanova, M., González-Romá, V., & Bakker, A.B. (2002b). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3, 71-92.

Schaufeli, W. B., & Taris, T. W. (2005). The conceptualization and measurement of burnout: Common ground and worlds apart. *Work and Stress*, 19 (3), 256-262.

Seçer, İ. & Gençdoğan, B. (2012). Ortaöğretim öğrencilerinde okul tükenmişliğinin çeşitli değişkenler açısından incelenmesi, *Turkish Journal of Education*, 1, 2, 28-40.

Seçer, İ., Halmatov, S., Veyis, F., & Ateş, B. (2013) Okul tükenmişlik ölçeğinin Türk kültürüne uyarlanması: Güvenilirlik ve geçerlik çalışması. *Turkish Journal of Education (TURJE)*, 2 (2), 16-24.



Uludağ, O. & Yaratın, H. (2010). The effect of burnout on engagement: An empirical study on tourism students. *Journal of Hospitality, Leisure, Sport and Tourism Education*, 9, 1, 13-23.

Van Rhenen, W., Blonk, R. W. B., Van der Klink, J. J. L., Van Dijk, F. J. H., & Schaufeli, W. B. (2005). The effect of a cognitive and a physical stress-reducing programme on psychological complaints. *International Archives of Occupational and Environmental Health*, 78, 139–148.

Weckwerth, A. C. & Flynn, D. M. (2006). Effect of sex on perceived support and burnout in university students. *College Student Journal*, 40 (2), 237–249.

Yang, H. J. (2004). Factors affecting student burnout and academic achievement in multiple enrolment programs in Taiwan's technical-vocational colleges. *International Journal of Educational Development*, 24, 283-301.

Yang, H. J. & Cheng, K. F. (2005). An investigation the factors affecting MIS student burnout in technical-vocational college. *Computers in Human Behavior*, 21, 917-932.

Yılmaz, T. D. (2009). *Ankara Üniversitesi Tıp Fakültesi Hastanelerinde tıpta uzmanlık öğrencilerinin tükenmişlik düzeyi ve ilişkili etmenler*. Yayınlanmamış Uzmanlık Tezi, Ankara Üniversitesi Sağlık Bilimleri Enstitüsü, Ankara.

Zhang, Y., Gan, Y. Q., & Zhang, Y.W. (2005). The reliability and validity of MBI-SS and academic characteristics affecting burnout. *Chinese Journal of Clinical Psychology*, 13, 383-385.

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

Zołnierczyk-Zreda, D. (2005). An intervention to reduce work-related burnout in teachers. *International Journal of Occupational Safety and Ergonomics*, 11, 423–30.