Educational Sciences: Theory & Practice • 14(5) • 1721-1727

www.edam.com.tr/estp
DOI: 10.12738/estp.2014.5.1727

Factors Affecting Burnout and School Engagement among High School Students: Study Habits, Self-Efficacy Beliefs, and Academic Success

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Abstract

This study examines high school students' levels of burnout and school engagement with respect to academic success, study habits, and self-efficacy beliefs. The data were gathered during the 2011–2012 school year from 633 students attending six high schools located in Ankara, Turkey. The analyses were conducted on responses from 605 students. The research methods included the Personal Information Form comprising items about students' demographic characteristics, the Maslach Burnout Inventory-Student Form, the Utrecht School Engagement Scale, the Study Habits Inventory, and the Scale for Self-Efficacy Expectations among Adolescents. The data were analyzed with multivariate analysis of variance. The results suggested that students with low self-efficacy beliefs had higher burnout levels. In addition, students with inadequate study skills and those with low self-efficacy beliefs were at higher risk of losing their beliefs. Another finding was that students with high academic success also had high self-efficacy. Unexpectedly, students with inadequate study skills and low self-efficacy beliefs were found to have high self-efficacy. Students with adequate study skills and high self-efficacy beliefs also had high school engagement levels. The study findings were discussed in relation to the literature and interpreted. Based on the interpretations, recommendations were made to school counselors and researchers.

Keywords

Academic Success, Burnout, High School Students, School Engagement, Self-efficacy Beliefs, Study Habits.

In the literature, Freudenberger (1974) first defined *burnout*, which then became a widely used concept as a result of Maslach's (1976) studies. First studied within professional caring groups, such as in health, education, and social services, burnout was later employed in other professional areas

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(Schaufeli, Martinez, Marqués-Pinto, Salanova, & Bakker, 2002). According to Maslach, Schaufeli, and Leiter (2001), burnout has three dimensions, namely emotional exhaustion, cynicism or depersonalization, and reduced personal accomplishment. In addition to burnout among professionals, burnout among students has lately become an area of research—sometimes termed *school burnout* and *academic burnout*.

Based on the three dimensions of burnout, Maslach defines student burnout as referring to feelings of exhaustion due to studying, reluctance to study or cynicism, and insufficiency as a student (Schaufeli et al., 2002). A literature review revealed that researchers focused mostly on burnout in university students (Rostami, Abedi, & Shaufeli, 2012; Schaufeli et al., 2002; Schaufeli & Taris, 2005) and particularly in those studying health sciences (e.g., Galan, Sanmartin, Polo, & Giner, 2011; Jennings, 2009). In general, research findings indicated that female adolescents experienced more school burnout than their male counterparts (Salmelo-Aro, Kiuru, & Nurmi, 2008); student burnout correlated negatively between adolescents and their academic successes (Kutsal & Bilge, 2012; Salmelo-Aro et al., 2008; Yang, 2004); internal motivation and low burnout level are related (Pisarik, 2009); and negative perfectionism and burnout are related (Zhang, Gan, & Cham, 2007). Yang and Farn (2005) and Schaufeli and Salanova (2007) found that students' self-efficacy beliefs are related to burnout. Moreover, a positive relationship exists between burnout and low social support from principals, teachers, family, and friends (Boudreau, Santen, Hamphill, & Dobson, 2004). As opposed to studies conducted elsewhere, a review of Turkish studies revealed a focus mainly on high school students' burnout. Aypay (2011) studied primary school students. Kutsal (2009); Aypay and Eryılmaz (2011a, 2011b); Sever and Aypay (2011); Aypay (2012); Çapri, Gündüz, and Akbay (2013); and Yedigöz, Sönmez, and Çapri (2013) studied high school students. Çapri, Gündüz, and Gökçakan (2011); Gündüz, Çapri, and Gökçakan (2012); and Çapri (2013) examined university students' burnout. Based on various research findings, Maddox and Prinz (2003) determined that factors affecting school engagement were family environment, gender, socioeconomic status, culture, age, and school environment.

Examination of views and models proposed in relation to *school engagement* emphasize that this concept, too, is considered multidimensional (two, three, and four) (Christenson, Reschly, & Wylie, 2012; Doll, Pfohl, & Yoon, 2010; Finn, 1993; Schaufeli et al., 2002). The most common is three-dimensional (emotional, behavioral, and cognitive) school engagement (Fredricks, Blumenfeld, & Paris, 2004). This concept emerged from related areas such as motivation, student attitudes, and self-regulatory learning (Fredricks, 2011). Having positive feelings about education, a sense of belonging to the school environment, a positive relationship with faculty and other students, attending school, participating in extracurricular activities, spending extra time on schoolwork, subscribing to the decisions taken in class and school, determining one's own learning objectives, and being able to voice one's views in class constitute school engagement (Mengi, 2011).

School engagement is highly important for completing one's education without dropping out and with relatively high academic achievement (Hirschfield & Gasper, 2011). Students reporting low school engagement are at higher risk of dropping out (Archambault, Janosz, Morizot, & Pagani, 2009); conversely, school engagement relates to low risk of dropping out (Fall & Roberts, 2012). A sense of belonging nurtured by a supportive environment correlates positively with school engagement and achievement, and other social environments. This finding shows that learning is a complex process that takes into consideration personal interactions and perceptions stemming from them (Walker & Greene, 2009). In other studies conducted on school engagement and school satisfaction, high levels of emotional and behavioral engagement predicted a decrease in school guilt and in a general sense of guilt (Hirschfield & Gasper, 2011). According to Li et al. (2011), besides fewer feelings of guilt, these factors also predicted low risk of substance abuse.

In relationships between school engagement and socio-demographic variables, male students were usually determined to have lower school engagement (Cernkovich & Giordano, 1992, as cited in Mengi, 2011; McNeely, Nonnemaker, & Blum, 2002; Mengi, 2011); additionally, school engagement decreases as class and age level rises (McNeely et al., 2002; Mengi, 2011). Basing their argument on several research findings, Maddox and Prinz (2003) indicated that the following factors affect school engagement: family climate, gender, socioeconomic status, culture, age, and school environment. In research on eighth graders, Finn (1993) found meaningful relationships between school engagement and academic success. In analyses after controlling for socioeconomic status

and family structure related to minority students (8–12th graders) in a low-income group, Finn and Rock (1997) concluded that school engagement is an important component of academic strength. In studies that focus on the relationship between burnout and school engagement, a negative correlation between burnout and school engagement was found (Schaufeli et al., 2002; Zhang et al., 2007). Study habits and self-efficacy beliefs, considered important variables in student burnout and school engagement, were included in this study. Effective study habits and using time effectively were related positively with students' graduating from high school (Suh & Suh, 2006).

For students to perform well in school, they must have self-efficacy beliefs. Bandura (1986) defines *self-efficacy beliefs* as judgments individuals employ to organize the necessary actions to perform successfully and their capacity to realize these actions. Ehrenberg, Cox, and Kopman (1991) contend that self-efficacy beliefs play an important role in adolescents' physical self-confidence, their academic development, their development of social proficiency, and the process of deciding on a career path. Various studies have determined that self-efficacy belief relates to depression (Çelikkaleli, 2010), life satisfaction, burnout (Çapri, Özkendir, Özkurt, & Karakuş, 2012; Schaufeli & Salanova, 2007; Yang & Farn, 2005), and grade-point average (GPA) and school engagement (Reinke & Hall, 2003).

When, because of the educational system's examination-centric structure, every student at almost all educational levels prepares for centralized examinations, studies on students' burnout levels, school engagement, and related factors will contribute to the national literature. The study attempts to answer the following question: Do students' perceptions of burnout and school engagement show significant differences according to their study habits, self-efficacy beliefs, and academic success?

Method

This study is quantitative and relational, i.e., it examines relationships between the variables. The Maslach Burnout Inventory-Student Form, the Utrecht School Engagement Scale, the Study Habits Inventory, and the Scale for Self-Efficacy Expectations among Adolescents were administered to the students along with the Personal Information Form. The resulting data were analyzed by multivariate analysis of variance (MANOVA).

Participants

The participants were 633 students studying at six high schools (253 students from three Anatolian high schools (academic high schools) and 380 students from three regular high schools). The data of 28 students were not analyzed because of problems with the responses. The responses of the remaining 605 students were analyzed. Of the valid response students, 159 attended 9th grade, 114 attended 10th, 255 attended 11th grade, and 107attended 12th grade. Of the participants, 344 (56.9%) were female and 261 (43.1%) were male. The average age was 16.33 (Sd: 1.11).

Instruments

Information about the forms and scales used in this research is provided below.

Personal Information Form (PIF): Information on students' gender, age, class, and academic achievement (GPA) was obtained via the PIF, a questionnaire developed by the researchers.

Maslach Burnout Inventory–Student Form (MBI–SF): Schaufeli, Salanova, Gonzalez-Roma, and Bakker (2002) adapted the Maslach Burnout Inventory–General Form (Maslach Burnout Inventory–General Survey) to university students. The Maslach Burnout Inventory–General Form was designed by Schaufeli, Leither, Maslach, and Jackson (1996) for application to all workers, based on the Maslach Burnout Inventory (Maslach & Jackson, 1981). Coefficients obtained during reliability studies of the MBI–SF were .66, .79, and .74. The 15-item MBI–SF, translated into Turkish by language and field experts, had three sub-scales. These three sub-scales were assessed from 0 to 6 points for each item, and each sub-scale was calculated separately. Exhaustion (EX) and Cynicism (CY) dimensions had negative expressions, whereas the Professional-Efficacy (PE) dimension had positive expressions. According to the results of confirmative factor analysis (CFA) conducted during the application of the inventory, the MBI–SF consisted of three sub-scales just as in the original. Cronbach's alpha coefficients of the subscales were .75, .78, and .71. Test-retest reliability coefficients were .99 for all three scales (Kutsal, 2009).

Utrecht School Engagement Scale (UWES): The 24-item UWES, designed specifically for working people, was adapted for university students by Schaufeli et al. (2002). As a result, the seven-degreed inventory consisted of 17 items. The inventory

adapted to Turkish by Kutsal (2009) was a 15-item form. In this form, three sub-scales were comprised of five items each. After removing four items as a result of the CFA, structural validity was achieved. The Vigor sub-scale consisted of three items, whereas Dedication and Absorption consisted of four items. The related internal consistency (Cronbach's alpha) values were .80, .79, and .75. In addition to internal consistency proofs, the UWES was applied to 83 students twice with a three-week interval. All correlations calculated for the sub-scales (.99, .93, .99) were significant at the .01 level.

Study Habits Inventory (SHI): The SHI is a 60-item inventory developed by Uluğ (1981) to determine students' study habits. Within the scope of its reliability studies, a logical evaluation in terms of subject matter, structure, and content of the items was conducted by experts. In the test–re-test reliability study, the correlation coefficient was .82. In the study conducted by Ergene (2011), the SHI's internal consistency was examined, and the Cronbach's alpha coefficient was determined to be .87.

Scale for Self-efficacy Expectations among Adolescents (SSEEA): The SSEEA was developed by Muris (2001) to determine adolescents' academic, social, and emotional efficacy beliefs; it was adapted to Turkish by Çelikkaleli, Gündoğdu, and Kıran-Esen (2006). SSEEA consists of 23 items ranked on a 5-point, Likert-type scale. Factor analysis determined that the scale has a three-factor structure: expectation of academic competence (EAC), expectation of emotional competence (EEC), and expectation of social competence (ESC), as was the case with the original form. Correlation coefficients between the Depression Scale for Children (DSfC) (Öy, 1991) and SSEEA and its sub-scales were examined. The correlation between DSfC and SSEEA's total point was r = –.12; the correlation between DSfC and EAC and ESC sub-scales was r = –.14 and r = –.12, respectively. The SSEEA's internal consistency was .78 for the complete measurement tool; and .64, .69, and .71 for EAC, EEC, and ESC, respectively. The SSEEA test–re-test reliability coefficient was .85, and the test–re-test reliability coefficients for EAC, EEC, and ESC were .77, .73, and .65, respectively.

Data Analysis

To determine any meaningful difference in high school students' perceptions related to burnout and school engagement according to their study habits, self-efficacy beliefs, and GPA, MANOVA was applied. To test the effect of the independent variables (meaningful according to MANOVA) on the dependent variables, Multifactor Analysis of Variance (ANOVA) was used. Due to MANOVA's assumption, appropriateness of the points of dependent variables, namely burnout and school engagement, to normal distribution was examined. Then, a Kolmogorov–Smirnov (K–S) normality test was conducted to determine the appropriateness of the burnout, cynicism, self-efficacy, and school engagement points. Equality of variants was tested by Levene's test. These analyses' results determined that MANOVA met the assumptions.

Results

To test whether school engagement, exhaustion, cynicism, and self-efficacy levels differ significantly according to the variables of study habits, self-efficacy beliefs, and academic success, MANOVA was conducted: The effect of independent variables over dependent ones was found significant. To examine one by one the effects of independent variables on dependent ones, ANOVA tests were conducted. According to the results, individuals with high study habit values had higher school engagement values compared to those with low study habit values ($F = 83.996$, $p<.001$). The same resulted for the self-efficacy belief variable; individuals with high self-efficacy belief values had higher school engagement values compared with those having low self-efficacy belief values ($F = 34.862$, $p<.001$).

In the comparisons for the exhaustion variable, exhaustion levels of individuals with low self-efficacy belief values were higher than those with high self-efficacy belief values ($F = 36.079$, $p<.001$). For the cynicism variable, individuals with high study habit values had a lower cynicism average compared with those having low study habits values ($F = 27.550$, $p<.001$). For the self-efficacy belief variable, individuals with high self-efficacy belief values had a lower average of cynicism compared with those having low self-efficacy belief values ($F = 31.702$, $p<.001$). As for the variables effective on self-efficacy averages, individuals with high study habit levels had a lower self-efficacy level compared with those having low study habit levels ($F =17.842$, $p<.001$), and similarly, individuals with high self-efficacy belief levels had lower self-efficacy levels compared with those having low self-efficacy belief levels ($F =49.405$, $p<.001$). According to another finding, those with high GPA values had higher self-efficacy levels ($F = 12.062$, $p<.001$).

Discussion

In this section, interpretations of the findings related to exhaustion, cynicism, and self-efficacy, which are the sub-scales of burnout, and then findings related to school engagement are discussed. According to research results, students who had low self-efficacy belief had higher exhaustion levels. In contrast, study habits and GPA do not create a meaningful difference in the exhaustion dimension. Study habits, self-efficacy beliefs, and GPA explain 11% of exhaustion. This low explanation ratio necessitates careful interpretation of the findings. Self-efficacy belief seems to be an important variable in students' exhaustion level. This is an expected result because students who have high expectations about their ability to succeed may experience less exhaustion.

Findings related to cynicism are as follows: Students with both low study habits and low self-efficacy beliefs had a higher cynicism level. GPA did not create a meaningful difference in the cynicism dimension. These three variables explain 23% of cynicism—an anticipated finding that expectation of study habits and self-efficacy belief make a meaningful difference in students' cynicism levels. That students who had more sufficient study habits and high self-efficacy beliefs were less likely to have cynicism is reasonably expected. These students may have a more school successful history, socially and academically, and positive academic experiences that provide them with the belief they can succeed if they try. Thus, these students may be more resilient to cynicism due to exhaustion. Here, as in the exhaustion level, the fact of no difference in cynicism levels between students with high and low GPAs is an unexpected result. Therefore, future studies should also explore these factors.

According to the findings for the third dimension of burnout (self-efficacy), study habits, self-efficacy beliefs, and GPAs had a meaningful effect. However, contrary to the expectations, those with insufficient study habits and low self-efficacy belief levels had high self-efficacy. Students with high GPAs had high self-efficacy. All three groups together explain 25% of self-efficacy. One factor in this surprising finding may be related to students' self-perception. If future studies do not support this finding, we might claim that our finding resulted from particular participants. Conversely, the fact that students with high GPAs also had high self-efficacy levels is an expected finding.

According to the findings related to school engagement, students with positive study habits and high self-efficacy beliefs also have high school engagement. Three variables, along with GPA, explained 32% of school engagement. Independent variables explained school engagement at a higher ratio compared with the sub-dimensions of burnout. Academic success–school engagement and self-efficacy belief–school engagement findings parallel Eith (2005, as cited in Mengi, 2011) and Reinke and Hall (2003). In this study, no difference was found in students' school engagement according to their GPAs, which were related only to the self-efficacy dimension of burnout.

From the findings of this study, the following suggestions can be made to researchers and practitioners: Research can be repeated on different study groups by using the sampling methods. In case of repetition, data for new variables can be gathered. In addition to quantitative research, a qualitative study can be designed, and in-depth interviews and focus-group interviews can be conducted. Taking Bask and Salmelo-Aro's (2012) thorough research as a model, risk groups in Turkey can be determined. Then, studies targeting these groups can be conducted. Psychological counselors can develop prevention programs, taking into consideration the importance of both burnout and school engagement for high school students; then, the effectiveness of these programs can be tested. The "Check and Connect" (Christenson & Reschly, 2010) program, which was prepared abroad in relation to dropout prevention, can be used. In addition, for preventive studies to be conducted in schools, Fredrick's (2011) model, which consists of alterations in students' tasks and responsibilities, sufficient in-class management, positive peer relations, and supportive teachers, can help increase school engagement. This study determined that students' self-efficacy beliefs, study habits, and academic success are important. Groups at risk in these areas can be determined and individual and group counseling can be performed. For instance, Bresó, Schaufeli, and Salanova (2011) concluded that a cognitive behavioral intervention program was effective on university students' self-efficacy belief, school engagement, and academic performance. Intervention programs for at-risk high school students can be designed by using this and similar studies.

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