

The relationship between psychological resilience and school burnout among high school students

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ABSTRACT This study investigates the relationship between psychological resilience and school burnout among high school students in the post-pandemic period through a path analysis. The sampling consists of 1,359 students. The data were collected with the Brief Resilience Scale and Maslach Burnout Inventory-Student Form. The data were analyzed using R software. The findings of the study are presented in two parts: comparison of group means and path analysis. In the first part, psychological resilience and school burnout levels of high school students were analyzed in terms of variables such as gender, school type and adaptation to daily life. In the second part, the relationship between school burnout and psychological resilience was tried to be determined by path analysis method. The study revealed that there was a negative relationship between resilience and school burnout and school burnout had a significant negative effect on psychological resilience ($\beta=-0.336$; $p<0.05$). Finally, 11% of the variance of psychological resilience is explained by school burnout. In addition, school burnout and psychological resilience variables were examined in terms of various demographic factors and significant differences were found between them. The findings are handled in the discussion section together with previous studies in the literature.

Keywords: Burnout, High school students, Psychological resilience

Lise öğrencilerinin psikolojik sağlamlığı ile okul tükenmişliği arasındaki ilişki

ÖZ Bu çalışmada pandemi sonrası dönemde lise öğrencileri arasındaki psikolojik sağlamlık ve okul tükenmişliği ilişkisi yol analizi kullanılarak araştırılmıştır. Örneklem 1.359 öğrenciden oluşmaktadır. Çalışmanın verileri Kısa Süreli Psikolojik Sağlamlık Ölçeği ve Maslach Tükenmişlik Envanteri kullanılarak elde edilmiştir. Bu veriler R programı ile analiz edilmiştir. Çalışmanın bulguları, grup ortalamalarının karşılaştırılması ve yol analizi olmak üzere iki bölümde sunulmuştur. İlk bölümde, lise öğrencilerinin psikolojik sağlamlık ve okul tükenmişliği düzeyleri; cinsiyet, okul türü ve günlük hayata uyum gibi değişkenler açısından incelenmiştir. İkinci bölümde ise, okul tükenmişliği ile psikolojik sağlamlık arasındaki ilişki, yol analizi yöntemiyle belirlenmeye çalışılmıştır. Çalışma sonucunda okul tükenmişliği ve sağlamlık arasında negatif korelasyon olduğu ve tükenmişliğin sağlamlığı negatif yönlü ve anlamlı düzeyde yordadığı sonucuna ulaşılmıştır ($\beta=-0,336$; $p<0,05$). Buna göre, psikolojik sağlamlığın varyansının % 11'i okul tükenmişliği tarafından açıklanmaktadır. Ayrıca, okul tükenmişliği ve psikolojik sağlamlık değişkenleri çeşitli demografik faktörler açısından incelenmiş ve aralarında anlamlı farklar bulunmuştur. Elde edilen bulgular, literatürde yer alan önceki çalışmalarla birlikte tartışma bölümünde ele alınmıştır.

Anahtar Sözcükler: Lise öğrencileri, Psikolojik sağlamlık, Tükenmişlik

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INTRODUCTION

The COVID-19 epidemic, which originated in December 2019 and lasted for an average of 3 years, caused millions of deaths (World Health Organization, 2024) and went out of the world's agenda on May 5, 2023 as it was not an international public health emergency and not an ongoing health problem anymore (World Health Organization, 2023). The health problems, transmission risks and increasing deaths that emerged during the COVID-19 period suddenly locked almost the entire world in their homes and, contrary to human nature, people who spent 24 hours at home and were stuck in their permanent residences, have become unable to meet their needs (Merino-Godoy et al., 2022). Companies, factories, educational institutions and virtual markets managed from home in virtual environments have emerged as indicators of increasing problems (Basri et al., 2022). Although the solutions devised for these problems (virtual workspaces, continuing education from home, etc.) saved the day, when people returned to their usual life, the traces left by the continuous life at home on human psychology have become a topic to be investigated.

It was observed that individuals caught unprepared for the pandemic processes in terms of health were not also equipped with the necessary information about psychological coping skills (Nazari & Ghadampour, 2021). Many classes of society have been adversely affected by this process. One of these classes is adolescents. Research on adolescents in the COVID-19 period revealed negative impacts on their mental health, including depression (Hawes et al., 2022). In addition, it led to challenging and undesirable experiences such as stress, isolation, and loneliness (Husky et al., 2020). Furthermore, it was noted that students adopted unhealthy coping mechanisms (Huang et al., 2020). It has been stated that especially during adolescence, individuals' emotions are constantly changing and this period risky and turbulent (Reitsema et al., 2022). When evaluated together with the negative effects of the pandemic, it was stated that students experienced concentration problems, lack of motivation and learning difficulties, especially during the pandemic (Lovric et al., 2020). When considered along with these statements, it can be said that the stress, depression and loneliness experienced by adolescents during the pandemic may lead to burnout.

The literature reveals that burnout was first studied in the professional field and focuses on the problems experienced by the individual in general work life. These problems are most commonly observed in individuals who work in jobs that require frequent interaction with people and often involve feelings of anger, shame, fear or hopelessness. These cases can cause chronic stress and emotional fatigue in the individual (Maslach & Jackson, 1981). In brief, burnout and its side effects may restrict the expected performance of individuals, increase stress levels and thus affect their moods negatively. Although it is considered that burnout is related to work and professional life, many researchers have stated that some tasks such as completing homework and going to class can also be considered a type of work (Lee et al., 2010) and have examined burnout in these dimensions.

School burnout (SB) is described as a pervasive feeling of pessimism and perceived fatigue about the intense schedule of homework and work that an individual must cope with (Schaufeli et al., 2002). It is also reported to be a significant contributing factor to school dropout and psychological problems among adolescents (Bask & Salmela-Aro, 2013). Research on SB indicates that some high school students exhibit symptoms of burnout related to their academic environment (Dogan & Dogan, 2023; Ipsos, 2021). It has been revealed that SB is a risk factor for isolation and signs of depression (Tang et al., 2021). Individuals experiencing school burnout often exhibit many symptoms, such as difficulty in learning skills (Söderholm et al., 2022) and experiencing stress and pressure due to school responsibilities (McCarthy et al., 1990; Said et al., 2024). Factors such as stress experienced by the individual in school life, intensity of classes or lack of motivation lead to desensitization, burnout and decreased success (Maslach et al., 2001). In a meta-analysis study conducted on medical students, the prevalence rates of burnout were examined and 37.23% overall burnout, 38.08% emotional exhaustion, 35.07% depersonalization and 37.23 % personal accomplishment prevalence rates were reported (Almutairi et al., 2022). As can be inferred from the preceding studies, burnout is a frequent situation.

Burnout has been examined in literature with the gender variable as well as in school environments. The relationship between gender and burnout presents different findings in terms of its effects. Examining burnout in relation to gender is often analyzed alongside various factors. Bresó et al. (2007) reported that gender was not a differentiating variable. However, the girls reported high levels of burnout and loss of faith. For instance, pre-pandemic studies showed that girls were inclined to experience higher academic stress and burnout levels than boys (Giota & Gustafsson, 2021). It was found in another study that male students experienced higher degrees of loss of faith than female students, and gender had a moderate impact on high school students' burnout levels (Kutsal & Bilge, 2012).

SB may increase depending on various factors. Situations such as feeling inadequate, lack of interest in lessons and school, or academic failure may increase the level of burnout in young people (Zhang et al., 2007). In addition, a report published in Switzerland for children and adolescents found that the frequency of psycho-emotional problems (sadness, anxiety, tension, difficulty falling asleep, depression) among young people aged 11-25 has increased in the last decade. The report also emphasizes that excessive use of digital media can trigger feelings of loneliness and depression (Swiss Health Report, 2020). This situation also leads to an increase in burnout (Gradiski vd., 2022). The data in question were collected before the pandemic, and it has been shown that this situation worsened during the pandemic. Especially after the first year of the pandemic, it has been emphasized that depression symptoms increased in approximately 25% of young people and anxiety symptoms increased in 20%. This data shows that young people are faced not only with daily stress but also with clinical-level of mental problems, and it is noted that this situation deepens burnout even more (Racine et al., 2021). In addition, it has been pointed out that the transition to distance education, especially during the COVID-19 process, has increased expectations from students (Wang et al., 2021) and that the perception of high demand and increased workload is a predictor of student burnout (Lacombe et al., 2023). On the contrary, it has been found that when students return to their daily lives after the pandemic, they are less likely to suffer from burnout syndrome than their peers when they feel confident about the future and receive adequate support to compensate for their shortcomings (Lacombe et al., 2023). SB has been studied with many concepts in the literature such as academic motivation (Güngör & Sarı, 2022), physical activity and depression (Ye et al., 2024), stress mindset and academic vitality (Lakkavaara et al., 2024). A significant one of these concepts is psychological resilience (PR) (Ding et al., 2023).

There are many descriptions of PR in the related literature. For American Psychological Association (2002), the ability of people to adjust to trauma, pain, tragedy, or the stressors they face (family, health, economic, etc.) is known as resilience. Furthermore, scholars have argued that PR grows normally in challenging circumstances (Fonagy et al., 1994). Similarly, they argue that the individual's ability to effectively manage distress, significant changes, or risky situations also increases under challenging conditions (Santrock, 2014). Although PR is described as the skill required for effective adjustment to extreme incidents such as mistreatment or poverty, it can also be defined as reactions to social or physical challenges encountered daily (Masten, 2001). In this context, researchers define PR with the presence of adversity, effective coping, and adjustment during challenging circumstances (Michael et al., 2024), and the influence of protective factors (Güldaş & Karşı, 2023). Individual's PR may change throughout their life during transitional periods when problems or stress levels are at their peak (starting school, separation from parents during adolescence, and childbirth) (Stewart et al., 1997) or with negative incidents (mourning, migration, violence, economic problems, negative parental attitudes) (Işık & Çelik, 2020). The fact that many people lose their lives, experience economic problems, and get sick due to unexpected events, such as a pandemic, which affect resilience, can be considered among negative situations (Altundağ, 2021). Savitsky et al. (2020) stated that people with a high PR can effectively deal with difficult situations or crises and have low anxiety levels. In contrast to this situation, the low PR of the individual causes many adaptation problems (Fergusson & Horwood, 2003). Especially individuals whose daily routines were disrupted with COVID-19 needed more support and PR (Suckow et al., 2023).

The Rationale of the Study

With the closure of schools during the pandemic (Liu et al., 2020), there was a significant increase in students' mental health problems (Lin et al., 2023). Considering the characteristics of the developmental period which individuals in adolescence are in, it is stated that coping with quarantine processes may be more challenging for adolescents compared to adults (Erduran-Tekin & Satan, 2024). A study by Simoës-Perlant et al. (2022) focusing on French adolescents revealed that young people were negatively affected by this process after COVID-19. Also, it was stated that conducting courses through distance education (Toubasi et al., 2023) and the adaptation to the new normal (Tran et al., 2023) increased the occurrence of SB within the student population in educational settings (Song et al., 2022). It has been reported that individuals who experience SB syndrome as a result of school-related problems tend to have lower levels of PR (Heinen et al., 2017). Considering this situation, students who experience SB and have low PR are expected to show less satisfaction in school environments, while individuals with high PR are expected to give more constructive responses to negative situations (Cengiz et al., 2024) as it is suggested that PR positively affects burnout at school and serves as a protective factor (Cheng et al., 2020; Fiorilli et al., 2020; Romano et al., 2021). In addition, it is stated that students with higher resilience may exhibit more positive academic attitudes (Wang et al., 2021). Additionally, several studies have identified a notable connection between school burnout and academic resilience (Burki, 2020), reporting that students having strong academic resilience are better equipped to mitigate burnout (Romano et al., 2019).

Building upon previous research that highlights the lasting psychological and behavioral impacts of the pandemic, this study explored the relationship between high school students' gender, post-pandemic adaptation, school type, SB, and PR. It also examined the connection between SB and PR. While the impact of the pandemic appears to have alleviated, this research is significant in assessing whether its effects persist (through the adaptation to variable daily life) and in identifying a potential link between SB and PR.

Purpose of the Study

The main goal of this study is to explore the relationship(s) between PR and SB among high school students through a path analysis. Furthermore, it was examined whether PR and SB varied significantly based on gender, school type, and adaptation to daily life. In order to realize these purposes, the study seeks answers to the following questions:

- 1- Do psychological resilience levels and school burnout differ significantly by gender?
- 2- Do psychological resilience levels and school burnout differ significantly by the type of school?
- 3- Do psychological resilience levels and school burnout differ significantly by students' adaptation to daily life?
- 4- Is there a significant relationship between psychological resilience and school burnout of high school students?

METHODOLOGY

The study aims at assessing students' PR and SB levels while exploring the relationship between these two constructs. Thus, the research adopts a dual approach, functioning as both survey research and causal-comparative research. Survey research includes collecting quantitative data on participants' opinions, interests, skills, abilities, attitudes, and other characteristics, typically from large samples, to provide an overall snapshot of a population or define a specific problem area (Büyüköztürk et al., 2012; Creswell, 2014). On the other hand, causal-comparative research is devoted to analyzing cause-and-effect relationships between variables. This approach uses various statistical methods to identify how one variable influences another (Büyüköztürk et al., 2012).

Study Group

Data were collected from 1,359 students enrolled in various high schools in a province in Türkiye, selected via convenience sampling. Table 1 includes demographic data on participants.

Table 1.
Data on Participants

		F	%
Gender	Female	837	61.59%
	Male	522	38.41%
School Type	Science High School (SHC)	330	24.28%
	Vocational High School (VHC)	183	13.47%
	Anatolian High School (AHC)	805	59.23%
	Religious High School (RHC)	41	3.02%
Adaptation to daily life	Yes	557	40.99%
	No	802	59.01%

n=1359

Data Collection Tools

Personal Information Form (PIF): Participants' data on their gender, school type and daily life adaptation were collected using PIF.

Brief Resilience Scale (BRS): This scale was created by Smith et al. (2008) to measure the PR of individuals and adapted into Turkish by Doğan (2015). The scale consists of six items, three of which are coded directly and three of which are reverse coded. The score range of the scale varies between 5 and 30. The Cronbach Alpha coefficient of the scale was stated as .83. In the current study, this coefficient was calculated as .85.

Maslach Burnout Inventory-Student Form (MBI-SF): This scale was developed by Schaufeli et al. (2002) to measure SB and was adapted to Turkish by Çapri et al. (2011). The scale consists of three sub-dimensions emotional exhaustion (EE), personal accomplishment (PA) and depersonalization (DEP). In practice, the sub-dimensions of the scale are scored and evaluated separately. The Cronbach Alpha value was calculated as .76 for (EE), .82 for (DEP) and .61 for (PA) respectively. In this study, Cronbach's Alpha value for the (EE), (DEP) and (PA) sub-dimensions were calculated as .85, .89 and .70 respectively, and the stratified alpha for the whole scale was .92.

Data Collection

Necessary permissions were obtained to collect research data. Permission documents from parents were collected in accordance with the permission of the related provincial National Education Directorate. Data from students were collected via Google Forms. A confirmation button was included in the Google Forms to ascertain participants' willingness to volunteer for the study. The consent form included information that participants can leave the study if they feel uncomfortable and that their data will be kept confidential. Volunteering students who did not have any psychiatric diagnosis the previous year participated in the study. Filling the form took 15 minutes per participant. Data collection was carried out between December 2022 and April 2023. In this study, a document dated 12.04.2022 and numbered 2022-SBB-0127 was obtained from the Bartın University Ethics Commission, showing the ethical suitability of the study.

Data Review and Data Cleaning

In line with the objective of the study, the data were reviewed, and assumptions were tested before the analyses. The scales were first applied to 1,359 individuals and the missing data of 30 variables were examined. It was discovered that there were 18 missing data in total, with 6 for each of items 1, 2, and

5. Missing data is below 1% of the entire data set (0.4%). For this reason, the missing data imputation method has been used. Since the data of the items were discrete, a mode-based imputation was made. A review based on Z score was conducted to examine the extreme values. No values other than ± 3 Z score were detected in the data.

For the data prepared for analysis, the assumptions of the analyses, namely homogeneity of variances, univariate normality and multivariate normality were examined. In addition, descriptive statistics (skewness, kurtosis), histogram and perspective graphs were implemented to provide additional evidence. In the analysis conducted to compare group means, the t-test and ANOVA were applied to datasets that fulfilled the assumptions of normality and homogeneity of variances. Conversely, the Kruskal-Wallis H test was utilized for datasets that did not meet these criteria. In variance analysis, Dunn test with Bonferroni correction was applied in Kruskal-Wallis H test.

Data analysis was carried out with R Studio. Within the scope of the study, MVN (Korkmaz et al., 2014), haven (Wickham & Miller, 2021), stats (R Core Team, 2022), dunn.test (Dinno, 2017), semTools (Jorgensen et al., 2021) and semPlot (Epskamp, 2022) packages were utilized. The variables included in the research are the sum of the values gathered from the entire BRS and from the sub-dimensions of the MBI-SF (EE- DEP and PA). The statistics related to the scales are shown in Table 2.

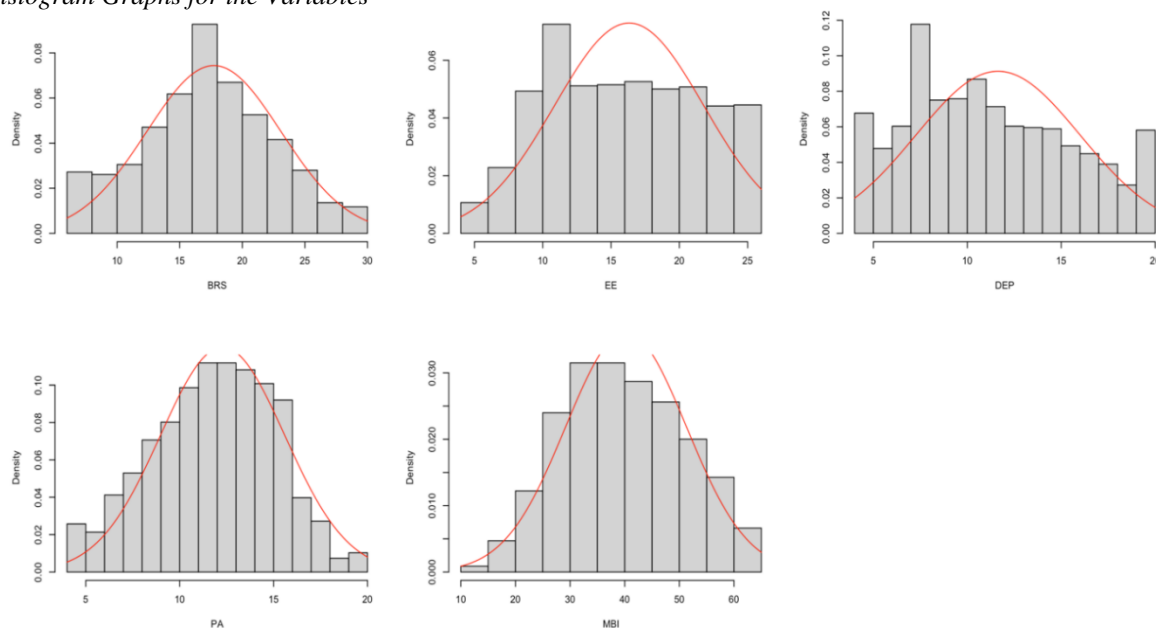
Table 2.
Descriptive Statistics by the Variables

Variables	Min	Max	\bar{X}	Sd	Skewness	Kurtosis
BRS	6	30	17.73	5.36	-0.076	-0.291
EE	5	25	16.32	5.47	0.014	-1.117
DEP	4	20	11.64	4.37	0.264	-0.871
PA	4	20	12.28	3.32	-0.220	-0.394
MBI	13	65	40.24	11.08	0.053	-0.720

n=1359

The presence of normality was examined with the values shown in Table 2. These data provide information about the univariate normality (skewness-kurtosis). It is recommended that these values should be in the ± 1 range to indicate a normal distribution (Johnson & Wichern, 2007; Tabachnick & Fidell, 2013). Histogram graphs also provided evidence of normality. Figure 1 shows the histogram graphs for the variables.

Figure 1.
Histogram Graphs for the Variables



According to the skewness and kurtosis values and histogram graphs, it can be said that there is a flat and skewed distribution for the variables EE and DEP, where univariate normality is provided for BRS, PA and MBI. The Mardia test was applied to examine multivariate normality. The results are as follows.

Table 3.

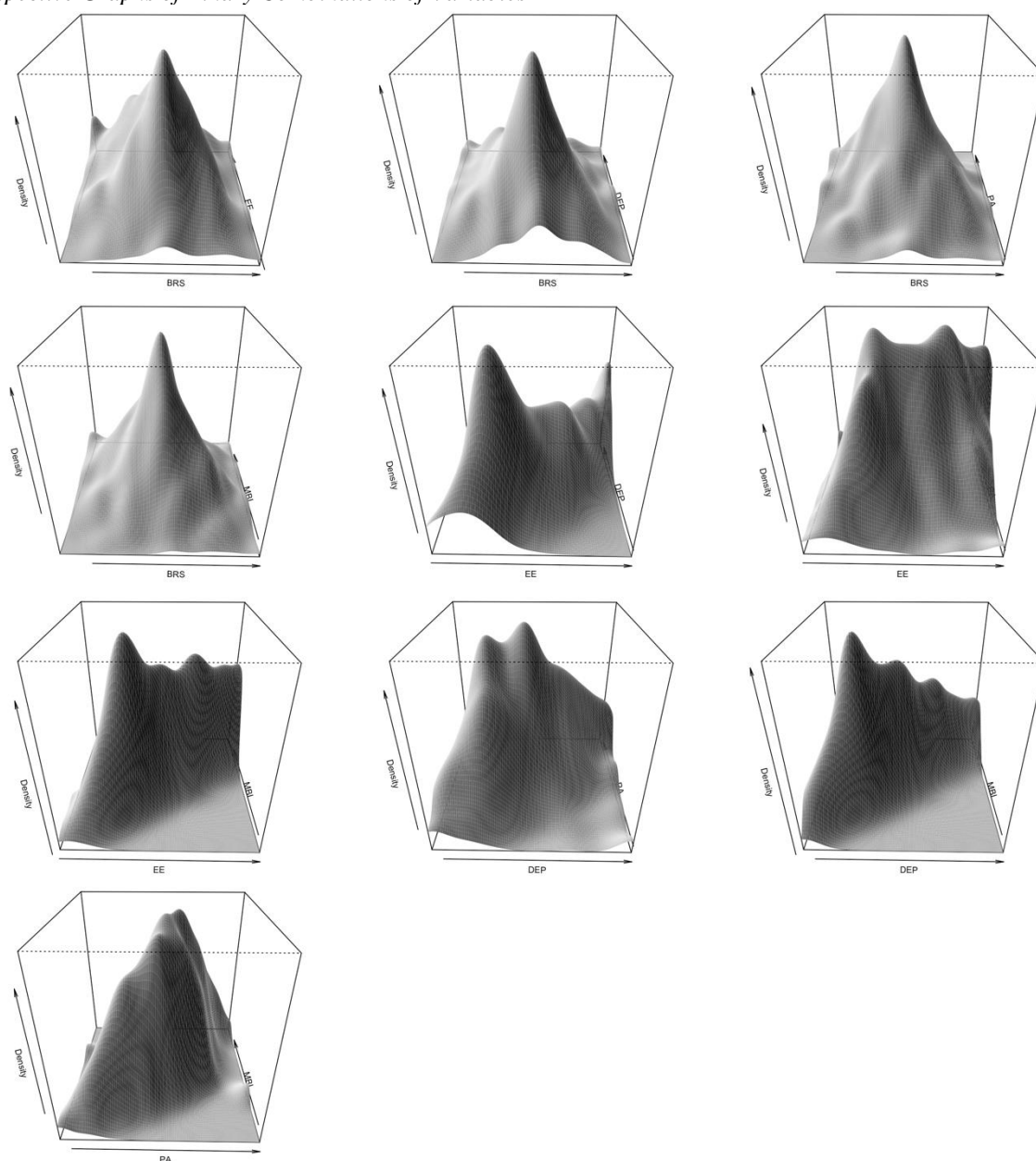
Test Results for Multivariate Normality

Test/Variable	Statistic	P
Mardia-Skewness	94.467	<0.001
Mardia-Kurtosis	-23.979	<0.001

As seen in Table 3, it is understood that the Mardia test statistics are significant and the distribution of the variables together with the ones in the perspective graphs in Figure 2 is far from the center of the planes, which indicates that multivariate normality is not achieved.

Figure 2.

Perspective Graphs of Binary Combinations of Variables



FINDINGS

The findings of the study consist of two parts: comparison of group means and path analysis. In the first part, it is aimed to make inferences by revealing the quantitative definition of the situation regarding the PR and SB of the high school students in the sample (Creswell, 2014), while in the second part, it is intended to identify the relationships between PR, DEP, EE and PA sub-dimensions of SB through path analysis (Jöreskog & Sörbom, 2001).

Table 4.

ANOVA Results of School Burnout with Respect to School Type

Variable	Source of Variance	Sum of Squares	Df	Mean Square	F	p	Post Hoc
School	Between groups	645	3	215.04	1.753	0.154	
	Within groups	166209	1355	122.66			-
	Total	166854	1358				

Table 4 demonstrates that there was no important difference in SB levels by school types ($p>0.05$, $F=1.753$, $p=0.154$). This meant that the type of school did not significantly affect students' SB levels.

Table 5.

T-Test Results of School Burnout by Gender and Adaptation Variables

Variable	Response Category	n	\bar{X}	sd	t	df	p
Gender	Female	837	16.612	11.187	-0.489	1125.26	0.625
	Male	522	19.525	10.926			
Adaptation to daily life	Yes	557	42.013	11.005	-4.959	1198.57	0.000*
	No	802	39.009	10.968			

As shown in Table 5, no important difference was found between male and female participants in SB levels ($p>0.05$, $t=-0.489$, $p=0.625$). A significant difference was found between the responses (Yes-No) according to the adaptation to daily life. ($p<0.05$, $t=-4.959$, $p=0.000$). The average SB level of those who answered “yes” is 42.013, while the average SB level of those who answered “no” is 39.009. Therefore, those who answered “yes” to the adaptation to daily life variable had higher SB levels.

Table 6.

Kruskal-Wallis H Test Results of Psychological Resilience by School Type

Variable	Response Category	N	\bar{X}	SD	χ^2	p	Post Hoc
School Type	SHS	330	17.9	2.46	18.381	0.000*	SHS>AHS
	VHS	183	18	2.87			
	AHS	805	17.5	2.62			
	RHS	41	17.2	3.15			

Note: SHS= Science High School, VHS= Vocational High School, AHS= Anatolian High School, RHS =Religious High School

As can be seen in Table 6, a significant difference was found between school types and PR levels ($p<0.05$, $\chi^2=18.381$, $p=0.000$). The difference between SHS and AHS is in favor of SHS. In other words, the PR levels of individuals attending SHS is higher than those of individuals attending AHS.

Table 7.

T-Test Results of Psychological Resilience by Various Independent Variables

Variable	Response Category	N	\bar{X}	Sd	t	Df	p
Gender	Female	837	16.612	5.292	-10.239	1156.028	0.000*
	Male	522	19.525	4.979			
Adaptation to daily life	Yes	557	15.693	5.025	12.350	1211.892	0.000*
	No	802	19.146	5.132			

As is seen in Table 7, a significant difference was found in the PR levels of students with respect to gender ($p<0.05$, $t=-10.239$, $p=0.000$). The analysis of the results reveals that female students exhibit

lower average resilience scores compared to male students. A similar result was observed in the PR and adaptation to daily life variables ($p < 0.05$, $t = 12.350$, $p = 0.000$). In examining the relationship between adaptation to daily life and PR, it was discovered that individuals who responded "yes" had significantly lower PR compared to those who responded "no". This indicates that individuals who have adapted to daily life exhibit lower PR levels than those who have not.

The study aims to examine the relationship between PR and SB and a structural model is built accordingly. In the study, fit indices were examined to determine the fit. Some researchers have suggested noble and acceptable fit indices which can be used for model fit adequacy (DiStefano et al., 2018; Kline, 2011). The suggested fit indices are presented in Table 8. These indices include frequently used criterion values as well as the WRMR value. Since WLSMV was used as the estimation method, this fit value was also examined. Table 8 also includes the fit indices for the established models.

Table 8.

Criterion Values for Noble, Acceptable and Models Fit

Indices	Noble Fit	Acceptable Fit	Model Fit	Modified model fit
CFI	$.95 \leq CFI \leq 1$	$0.90 \leq CFI < 0.95$	0.967	0.997
RMSEA	$.00 \leq RMSA \leq .05$	$.05 < RMSA \leq .08$	0.127	0.053
SRMR	$.00 \leq SRMR \leq .05$	$.05 < SRMR \leq .10$	0.061	0.020
WRMR	$WRMR < 0.9$	$WRMR < 1$	2.134	0.692

Note: CFI=Comparative Fix Index, RMSEA=Root Mean Error of Approximation, SRMR=Standardized Root Mean Square Residual, WRMR= Weighted Root Mean Square Residual

When the fit indices for the first model established in Table 8 are examined ($CFI = 0.967$, $RMSEA = 0.127$, $SRMR = 0.061$, $WRMR = 2.134$) and compared with the criteria, it can be said that the model-data fit is good and within acceptable ranges for CFI and SRMR values, while RMSEA and WRMR values indicate a very poor fit (Browne & Cudeck, 1993; DiStefano et al., 2018). Therefore, the modification indices for the first model were examined. As a result, it was agreed that covariance should be established between the residual values of depersonalization (DEP) and emotional exhaustion (EE). There is a study showing that both variables have a similar variance that is not explained by SB (Ertekin-Pinar et al., 2015; Smith & Emerson, 2021). Before examining the fit indices for the modified model, it was examined whether the newly created model statistically and significantly fit the data better than the other model according to the CFI difference test. Since the Comparative Fit Index (CFI) difference between the initial model and the revised model was greater than 0.01 (0.03), this difference demonstrated that the revised model provided a significantly better fit than the initial model (Byrne, 2016). When the fit indices of the modified model were examined ($CFI = .997$, $RMSEA = .053$, $SRMR = .020$, $WRMR = .692$), it was concluded that the revised model provided an excellent fit to the data. Therefore, the revised modes, as shown in Figure 3, was selected. The model was established to identify the relationship between PR and SB.

When Figure 3 is examined, it is clearly observed that school burnout (SB-MBIS), which affects psychological resilience (PR) as an observed variable in the model, was incorporated into the model as a latent construct. The observed structures explaining SB are DEP, PA, and EE. The parameters for this model are shown in Table 9.

In Table 9, it is observed that all coefficients except the path coefficients ($MBIS \rightarrow EE$ and $MBIS \rightarrow DEP$) between the MBIS latent variable and emotional exhaustion (EE) and depersonalization (DEP) are statistically significant. However, the significance of the relevant path coefficient for determining the scale of the MBIS latent variable, $MBIS \rightarrow EE$, could not be tested because this path coefficient was fixed to 1.

Figure 3.
Path Analysis Model

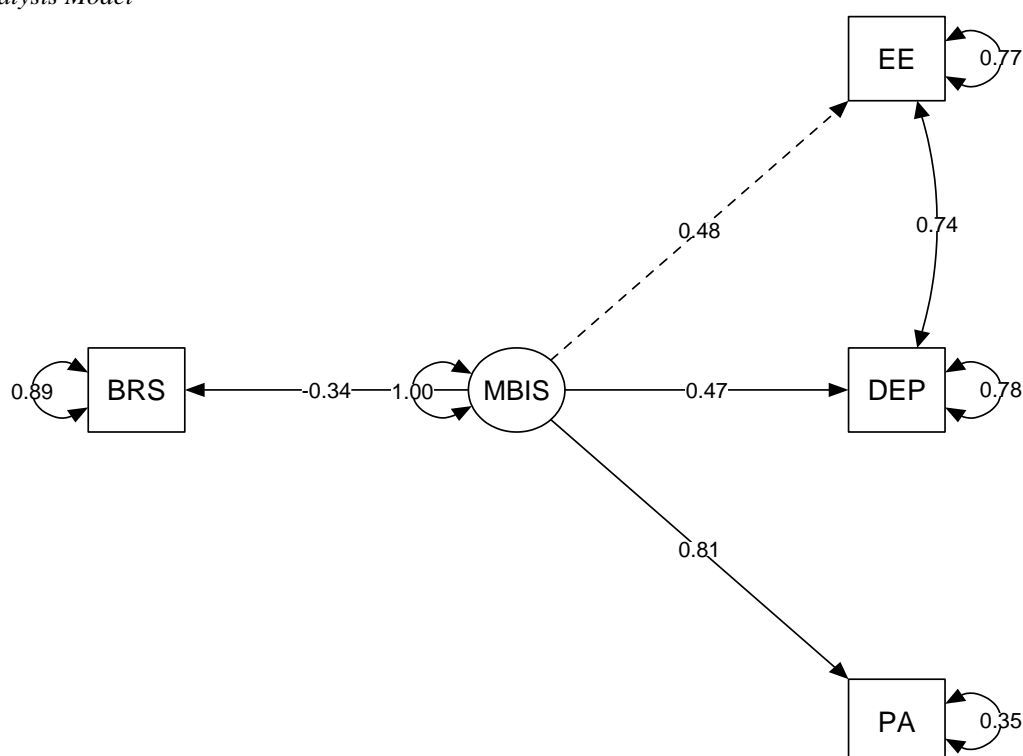


Table 9.
Path analysis Model Parameters

Parameter	Unstandardized	SE	Standardized
Direct Effects			
MBIS→BRS	-1.800*	0.089	-0.336
MBIS→EE	2.619	-	0.479
MBIS→DEP	2.037*	0.082	0.466
MBIS→PA	2.679*	0.176	0.807
Variances			
EE	23.083*	1.586	0.771
DEP	14.958*	1.013	0.783
PA	3.830*	1.307	0.348
BRS	25.517*	1.167	0.887
MBIS	1.000	1.390	1.000
Covariances			
EE↔DEP	13.658*	1.129	0.735

* $p < 0.01$

The analysis of the standardized coefficient values reveals that the MBIS→EE and MBIS→DEP path coefficients are less than the 0.50 value suggested by Byrne (2016). However, there are two important reasons why these variables should not be removed from the model. First, the standardized path coefficients (0.479 and 0.466) are quite close to the cut-off value. Secondly, there are statements in the literature that the observed variables of emotional exhaustion (EE) and depersonalization (DEP) explain school burnout (Akbaşlı et al., 2019; Smith & Emerson, 2021). For these reasons, these variables were not removed from the model.

It was calculated that SB had an effect of -0.336 on PR. This value suggests that one standard deviation increase in SB will decrease the predicted PR by 0.336 standard deviations. The standardized variance ratio of PR was calculated as 0.887. Approximately 89% of the total variance for PR was not explained, indicating that SB accounts for approximately 11% -0.336^2 of PR.

DISCUSSION AND CONCLUSION

This study investigated the relationship between school burnout (SB) and psychological resilience (PR) of students attending various high schools in a province of Türkiye after the COVID-19 pandemic. It was examined whether the students' average scores changed according to factors such as gender, type of school, and adaptation to daily life after the pandemic. Findings suggest a relationship between SB and PR. In addition, significant differences were found in SB and PR variables with respect to adaptation to daily life, school type and gender. The COVID-19 pandemic, due to both affecting the entire world and lack of information about its content, has many negative effects on both psychological and mental health, distinguishing it from other disasters and traumatic situations (Nazari et al., 2021). These effects were seen in all areas and all age groups, and people were put to serious tests with quarantine processes. This study focused on adolescents, one of the groups most influenced by the pandemic (Simoës-Perlant et al., 2022).

It was observed that the SB level differed significantly according to variable of the ability to adapt to daily life. The findings show that students who answered "yes" to the variable of adapting to daily life exhibited higher levels of burnout. The uncertainties of the COVID-19 period (Simoës-Perlant et al., 2022) and both the mental and physical problems experienced during this period continue to affect the lives of those influenced by post-COVID-19 traumata. Even a year later, patients stated that they still have difficulty returning to daily life (Islam et al., 2024). Accordingly, although the students who participated in the study stated that they adapted to daily life, it can be interpreted that their SB levels remained high due to factors such as pandemic-related stress, trauma experiences, lockdown periods, return to face-to-face education, intensive course processes, stress or lack of motivation (Yang & Farn, 2005). In addition, students' adaptation to daily life was measured based on their own perceptions, not through a standardized scale.

This study revealed a statistically significant difference in PR levels based on the ability to adapt to daily life. The findings show that students who answered "yes" regarding their adaptability had significantly lower PR compared to those who answered "no." This could be considered as an unexpected result. This indicates that individuals who have adapted to daily life exhibit lower PR levels than those who have not. These findings suggest that adapting to daily life may not have a positive influence on a person's PR as expected. This finding could originate from the possibility that the students participating in the study did not accurately assess their adaptation to daily life after the pandemic, as it was not evaluated using a standardized scale. Apart from that, during the pandemic, individuals had to get used to various new practices such as talking to their relatives on the phone or online, wearing masks or washing hands for the purposes of hygiene (Hou et al., 2020). This situation has had a negative impact on the individual in many ways. Students may have had difficulty adapting to daily life. With the reopening after the pandemic, re-adapting to the daily routine may be beneficial in protecting health of the individual (Nazari et al., 2021). A study has put forward that having a regular routine is effective in reducing stress (Suckow et al., 2023). Resilience can be improved by paying attention to daily routines and developing positive habits, especially after the pandemic.

PR and SB variables were examined with respect to gender. Results indicated that burnout levels did not differ significantly between male and female participants. There are studies with similar results in the literature (March-Amengual et al., 2022; Simoës-Perlant et al., 2022). In contrast to this study, several studies have identified a significant correlation between SB and gender (Güler & Bedel, 2022; Hermann et al., 2019; Jagodics et al., 2022). Tang et al. (2021) reported that the negative impact of SB on depressive symptoms and loneliness was comparable for both girls and boys. The study conducted by Tansel (2016) on SB was examined by gender and it was concluded that boys experienced more burnout and depersonalization than girls in the exhaustion and depersonalization sub-dimensions. The study's findings suggest that the uncertainty and severity of the pandemic may have had comparable effects on the cognitive skills of both girls and boys in relation to burnout.

The findings of this study show that there is a significant gender difference in students' resilience levels;

female students scored lower on average compared to male students. This finding is in line with previous research reporting that women have lower levels of resilience than men (Atarbay, 2017; Sardella et al., 2022; Xue et al., 2024). However, there are also contradictory results in the literature. For example, some studies reported that females have higher levels of resilience than males (Demir & Çiftçi, 2020; Kumpfer, 1999), while others reported that there is no significant difference in resilience in adolescents by gender (Doğruer, 2019; Işık & Çelik, 2020). The gender differences identified in this study can be explained by the fact that social values and gender roles in society are not fully established and shaped by the expectations attributed to men and women (Çiçekli, 2019; Geçit, 2013; Vincent, 2006). It is also thought that the encouragement of boys and the backgrounding of girls contribute to this result.

In the study, burnout levels among students did not vary significantly with respect to school type. In the same way, Simoës-Perlant et al. (2022) reported that they did not observe a significant difference between school burnout and type of school (public school-private school). In contrast to this study, Gündüz and Özyürek (2018) found significant differences between burnout and school types in their study. While family and teacher dynamics were prominent in VHS and AHS students as the source of these differences, studying and doing homework were prominent in SHS students. In addition, Çapulcuoğlu and Gündüz (2013) stated that burnout was higher in SHS, AHS, Social Sciences and Anatolian Teachers' High School students compared to General High Schools and VHS. In another study, Seçer and Gençdoğan (2012) reported that burnout levels of students attending General High Schools were higher than other high school types. It is considered that no significant difference was found in the current study because all high school students had similar concerns during the pandemic period, the content of the pandemic was unknown, and such a period had not been experienced before.

This study found a significant variation in individuals' PR levels based on the type of school. The difference between SHS and AHS is in favor of SHS. In other words, it was identified that the PR levels of students in SHS is higher than those of students in AHS. Özkara and Özbay (2018) stated in their study investigating PR by the type of school that they did not observe a significant relationship between school types and PR. In the high school entrance exams held in Türkiye, SHS students are placed in these schools with the highest scores and school averages. It is thought that SHS students adapt to this difficult living condition more quickly and continue to study in line with their goals due to reasons such as study discipline and having established routines related to studying.

The study identified a negative correlation between PR and SB, concluding that SB significantly diminished PR. Accordingly, SB accounts for 11% of the variance in PR. There are numerous studies in the literature which address the outcomes of this research (Cengiz et al., 2024; Gong et al., 2023; Gündoğan, 2023; Sgatni & Zerzour, 2024; Smith & Emerson, 2021; Tang et al., 2021; Wang et al., 2024). Courtney et al. (2020) stated that the students who stayed away from school and friends during the pandemic experienced various psychological problems, and Simoës-Perlant et al. (2022) pointed out that adolescents' psychological and emotional problems continued after the pandemic. These issues have contributed to various negative outcomes, including heightened burnout (Song et al., 2022). Yaghoobi et al. (2019) stated that especially students who are not interested in education and lessons and do not make enough effort will experience burnout. Additionally, some studies reported that individuals experiencing burnout syndrome due to school-related issues have lower resilience levels (Heinen et al., 2017; Said et al., 2024). Yildirim et al. (2022), express that resilience has positive effects on psychological adaptation problems and is an important variable in mitigating or preventing risk factors such as school burnout. Similarly, Koçhan & Aypay (2024) have stated that increasing students' psychological resilience levels and reducing school burnout levels are important. Chen et al. (2022) claimed that the stress situations and burnout experienced by individuals with high resilience can be minimized and related individuals can have the ability to prevent academic burnout. Individuals with high resilience levels tend to be emotionally stable and less prone to burnout. Tran et al. (2023) highlighted that resilience serves as an indispensable tool for reducing burnout and protecting mental health in the post-COVID-19. Similarly Liu et al. (2024) explained resilience as a strong determinant in reducing school burnout. Smith and Emerson (2021) also found that significant negative correlation between resilience, psychological distress, and all of the three dimensions of academic burnout. They

emphasized that resilience functions as a compensatory mechanism, particularly serving as an external determinant in mitigating distress and burnout.

When the studies are examined, school burnout negatively affects the lives of individuals depending on many factors. Especially during the pandemic, considering the adjustment to the new normal, unpredictable changes regarding the physical health, and quarantine processes, it is likely that the levels of burnout in individuals may increase. These factors may lead to psychological burden on individuals and psychological resilience may contribute significantly in overcoming these processes in a healthy way.

Recommendations and Limitations

The review of the literature and findings indicate that elevated levels of school burnout among adolescent students heighten the likelihood of experiencing various educational and psychological challenges. Resilience is also recognized as a safeguarding mechanism (Kukihara et al., 2014). Therefore, psycho-educational programs can be developed to reduce students' burnout levels and increase their resilience, especially in schools. In addition, parents can be informed about burnout under through school guidance services and supported in assisting their children more effectively. Finally, course curricula can be updated to prevent students from losing motivation due to unnecessary and overly busy schedules.

There are limitations to this study. The research was limited to a specific region of Türkiye following the COVID-19 outbreak. Future studies could include a larger sampling more diverse sample using stratified sampling across the country in a way that the effect in general reflects the diversity of the target population. Additionally, the data for this study were gathered through a self-reported online survey, making it limited to the students' responses and perceptions. Therefore, the data collected may have caused biased information and limited access. In future studies, various measurements (qualitative studies, psycho-educational programs) and approaches can be employed to draw more comprehensive and strong conclusions. In addition, there is no balanced distribution between school types in the study, and it would be more appropriate to conduct studies with a more balanced distribution in future studies.

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TÜRKÇE GENİŞLETİLMİŞ ÖZET

Bu çalışmanın amacı, pandemi sürecinden sonra lise öğrencilerinin psikolojik sağlamlığı ile okul tükenmişliği arasındaki ilişkinin incelenmesidir. 2019 yılının aralık ayında Çin’de ortaya çıkan COVID-19 pandemisi arkasında milyonlarca ölüm (Dünya Sağlık Örgütü, 2023) bırakarak dünyanın gündeminden çıkmıştır. Yaşanan pandemi süreçlerine sağlık üzerinden hazırlıksız yakalanan bireyler, psikolojik baş etme becerilerinde de gerekli bilgilere sahip olmadıkları görülmüştür (Nazari ve Ghadampour, 2021). Pandemi sürecinden pek çok kesim olumsuz etkilenmiştir. Bunlardan biri de ergen ve genç yetişkinlerdir. COVID-19 sürecinde ergenler ve genç yetişkinlere yönelik çalışmalar incelendiğinde depresyon gibi ruh sağlığı üzerinde olumsuz etkilerine rastlanmıştır (Hawes vd., 2022) stres, izolasyon ve yalnızlık gibi bireyi rahatsız eden ve istenmeyen durumların ortaya çıkmasına neden olduğu gözlenmiştir (Husky vd., 2020). Bu ifadelerle birlikte düşünüldüğünde pandemi sürecinde ergenlerin yaşadıkları stres, depresyon ve yalnızlık gibi durumların tükenmeye neden olacağı söylenebilir. Maslach’ın da ifade ettiği gibi öğrenci tükenmişliği, ders çalışmaktan dolayı tükenme duygusu, çalışmaya karşı duyarsızlık ya da inancını kaybetme ve bir öğrenci olarak kendini yetersiz hissetme anlamında kullanılmıştır (Schaufeli vd., 2002). Okul tükenmişliği ergen gruplarında okul terkinin ve psikolojik sorunların en önemli nedenlerinden biri olduğu belirtilmiştir (Bask ve Salmela-Aro, 2013). Okul tükenmişliği ile ilgili yapılan çalışmalar lise öğrencilerinin önemli bir bölümünün okul kaynaklı tükenmişlik belirtileri gösterdiğini doğrulamaktadır (Ipsos, 2021). Okul tükenmişliği yaşayan bireyler genellikle öğrenme becerilerinde zorluk (Söderholm vd., 2022) ve okul sorumlulukları nedeniyle stres ve baskı yaşama (McCarthy vd., 1990; Said vd., 2024) gibi birçok belirti sergilemektedir. Bireyin okul hayatında yaşadığı stres, derslerin yoğunluğu ya da motivasyon eksikliği gibi faktörler duyarsızlaşmaya, tükenmişliğe ve başarının düşmesine neden olmaktadır (Maslach vd., 2001). Tıp öğrencileri üzerinde yapılan bir meta-analiz çalışmasında, tükenmişliğin yaygınlık oranları incelenmiş ve %37,23 genel tükenmişlik, %38,08 duygusal tükenme, %35,07 duyarsızlaşma ve %37,23 kişisel başarı yaygınlık oranları bildirilmiştir (Almutairi vd., 2022).

Özellikle pandemi döneminde yeni dönemle ilgili bilgisizlikler, uzaktan eğitim araçlarının bireyin hayatına girmesi, kısıtlamalar ve eve hapsolme ergenlerde her ne kadar tükenmeye davetiye çıkarsa da bu tarz salgın ya da travma durumları bireyin bir bakımdan sağlamlığının gelişmesinde de önemli dönüm noktaları olabilir. Çünkü sağlamlığı gelişmiş bireyler karşılaştıkları pek çok olumsuz duygu durum ya da travmalara, pandemi benzeri olumsuz olaylara bu becerileri sayesinde daha kolay adapte olabilir. Bu açıdan düşünüldüğünde psikolojik sağlamlık, bireylerin karşılaşmış olduğu (ailesel, sağlık problemleri, ekonomik problemler vb.) travma, sıkıntı, trajedi veya önemli stres faktörleri karşısında uyum sağlama yeteneği olarak ifade edilebilir (Amerikan Psikoloji Derneği, 2002).

Yeni normale uyum sürecinde (Tran vd., 2023) eğitimde öğrenciler arasında tükenmişliğin yaygınlığının arttığı belirtilmiştir (Gradiski vd., 2022). Okulla ilgili sorunlar sonucunda tükenmişlik sendromu yaşayan bireylerin sağlamlık düzeylerinin daha düşük olma eğiliminde olduğu bildirilmiştir (Heinen vd., 2017). Bu durum göz önünde bulundurulduğunda, okul tükenmişliği yaşayan ve sağlamlığı düşük olan öğrencilerin okul ortamlarında daha az memnuniyet göstermeleri beklenirken, sağlamlığı yüksek olan bireylerin olumsuz durumlara daha yapıcı tepkiler vermesi beklenmektedir (Cengiz vd., 2024). Bu nedenle özellikle sağlamlığın yüksek olması, düşük kaygı ve olumlu duygusallık okul tükenmişliğinin yaşanmasında bir engel olarak nitelenebilir (Fiorilli vd., 2020). Bu çalışma COVID-19 sonrası lise öğrencilerinin özellikle pandemi döneminin izlerini ne düzeyde taşıdığı ve COVID-19 sonrası psikolojik sağlamlık ve okul tükenmişliği arasındaki ilişkinin ne düzeyde olduğunu belirlemek açısından önemlidir.

Araştırmanın çalışma gurubu Türkiye’nin bir ilinde dört farklı lisede eğitimine devam eden ve uygun örnekleme yöntemiyle seçilen toplam 1359 öğrenciden oluşmaktadır. Çalışmada Kısa Psikolojik Sağlamlık Ölçeği, Maslach Tükenmişlik Ölçeği-Öğrenci Formu ve ‘Kişisel Bilgi Formu’ kullanılmıştır. Grup ortalamalarını karşılaştırmak için yürütülecek analizlerde normallik ve/veya varyansların homojenliği varsayımlarını karşılayan verilerde bağımsız gruplar t testi ve ANOVA tercih edilirken

karşılamayan verilerde Kruskal-Wallis H testi tercih edilmiştir. Varyans analizlerinde gruplar arası anlamlı farklılıklar Kruskal-Wallis H testinde Bonferroni düzeltmesiyle beraber Dunn testi uygulanarak elde edilmiştir. Verilerin analizi için tüm çalışmalar R Studio ile yürütülmüştür.

Çalışma bulgularına göre; psikolojik sağlamlık ve okul tükenmişliği değişkenleri cinsiyet bağlamında incelenmiştir. Çalışmaya göre kadınlar ve erkekler arasında tükenmişlik düzeyleri arasında anlamlı bir fark bulunmamıştır. Psikolojik sağlamlık düzeyinin ise cinsiyete göre istatistiksel olarak farklılaştığı görülmüştür. Mevcut çalışmada tükenmişlik düzeyleri arasında okul türlerine göre anlamlı bir farklılık bulunamamıştır. Yapılan çalışmada bireylerin okul türüne göre psikolojik sağlamlık düzeyleri arasında anlamlı farklılık bulunmuştur. Okul tükenmişliği ve psikolojik sağlamlık düzeylerinin günlük yaşama uyum sağlama becerileri değişkenine göre istatistiksel olarak anlamlı şekilde farklılaştığı görülmüştür.

Çalışma sonucunda psikolojik sağlamlık ve okul tükenmişliği arasında negatif ilişki olduğu ve tükenmişliğin psikolojik sağlamlığı negatif yönlü ve anlamlı düzeyde yordadığı sonucuna ulaşılmıştır ($\beta=-0,336$; $p<0,05$). Buna göre, psikolojik sağlamlığın varyansının % 11'i okul tükenmişliği tarafından açıklanmaktadır. Yapılan çalışmalar incelendiğinde okul tükenmişliği pek çok faktöre bağlı olarak bireylerin hayatını olumsuz etkilemektedir. Özellikle pandemi süreçlerinde fiziksel sağlıkta baş gösteren bilinemez değişimler, karantina süreçleri ve hala hayatın devam ettiği gerçekleri ile birlikte ele alındığında bireylerin tükenmişlik düzeylerinin artması muhtemeldir. Bu süreçlerin sağlıklı atlatılmasında, bireyin zorluklar karşısında hayata tutunabilmesinde psikolojik sağlamlığın önemi dikkat çekmektedir.