SCHOOL BURNOUT IN SECONDARY AND HIGH SCHOOL STUDENTS: A SYSTEMATIC REVIEW

BURNOUT ESCOLAR EM ALUNOS DO ENSINO MÉDIO E MÉDIO: UMA REVISÃO SISTEMÁTICA

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ABSTRACT

This review study is prompted by an assumption that secondary and high school pupils are more sensitive to school burnout. The objective of this paper is to evaluate burnout studies to determine the concept of school burnout as well as the elements that impact it. This review incorporates three years of studies on the link between school burnout and secondary and high school student performance as well as recognized cognitive and emotional factors that account for this association. Previous reviews have found moderate correlations between these variables; however, few have discussed the mediating and moderating factors that influence this connection. Systematic searches of psychiatric, educational, and pertinent internet sources were done in December 2022 for research studying school burnout and performance in secondary and high school demographics released between 2019 and 2022. Thirty-eight papers were eligible. The findings from the review of these studies revealed that school burnout was modestly connected to performance. In addition, several mediating and moderating variables, such as emotional tiredness, academic pressure, and family participation, were discovered. However, due to the lack of longitudinal studies analyzed, additional research into how these variables interact over time is required to prove causality and discover the dynamic connection between school burnout, performance, and the motivational and cognitive factors that influence it.

Keywords: School burnout, high school students, secondary school students, performance.



<u>Resumo</u>

Este estudo de revisão parte do pressuposto de que os alunos do ensino secundário e secundário são mais sensíveis ao esgotamento escolar. O objetivo deste artigo é avaliar estudos de burnout para determinar o conceito de burnout escolar, bem como os elementos que o impactam. Esta revisão incorpora três anos de estudos sobre a ligação entre o esgotamento escolar e o desempenho dos alunos do ensino secundário e secundário, bem como factores cognitivos e emocionais reconhecidos que explicam esta associação. Revisões anteriores encontraram correlações moderadas entre estas variáveis; entretanto, poucos discutiram os fatores mediadores e moderadores que influenciam essa conexão. Pesquisas sistemáticas em fontes psiquiátricas, educacionais e pertinentes da Internet foram feitas em dezembro de 2022 para pesquisas que estudavam o esgotamento escolar e o desempenho na demografia do ensino médio e secundário, divulgadas entre 2019 e 2022. Trinta e oito artigos foram elegíveis. As conclusões da revisão destes estudos revelaram que o esgotamento escolar estava modestamente ligado ao desempenho. Além disso, foram descobertas diversas variáveis mediadoras e moderadoras, como cansaço emocional, pressão acadêmica e participação familiar. No entanto, devido à falta de estudos longitudinais analisados, são necessárias pesquisas adicionais sobre como essas variáveis interagem ao longo do tempo para comprovar a causalidade e descobrir a conexão dinâmica entre o esgotamento escolar, o desempenho e os fatores motivacionais e cognitivos que o influenciam.

Palavras-chave: Burnout escolar, alunos do ensino médio, alunos do ensino médio, desempenho.

Introduction

School life includes a period of long years. During the educational life of the students, negative outcomes may emerge as well as the desired positive structures. Students' starting to take standardized exams from an early age and the constant change in the content and forms of these exams cause anxiety and stress for students, which in turn affects their attitudes towards school (Schaufeli et al., 2002). These duties and responsibilities expected from students may cause students to develop negative feelings and attitudes towards school. Although the concept of burnout is generally handled with work experiences (Maslach et al., 2001), studies dealing with burnout in educational experiences have also become widespread in recent years (Kiuru et al., 2008). Burnout is explained as a failure, distress, or fatigue caused by the extensive and intensive use of force, effort, and other personal variables (Maslach et al., 2001).

Burnout at work is described as emotional weariness, depersonalization, and diminished professional competence (Maslach et al., 2001). School, like business, provides a setting in which students work and there are expectations of pupils (passing the exam, attending classes, etc.). As a result, the idea of burnout has been

utilized to describe educational processes as well (Salmela-Aro et al., 2009). Thus, the idea of burnout has been expanded to the setting of school (Salmela-Aro et al., 2009) and university students' work (Schaufeli et al., 2002). School burnout is described as a school-related condition characterized by emotions of exhaustion in the face of school responsibilities, depersonalization in the face of school demands/requirements, and feelings of inadequacy (Kiuru et al., 2008). School burnout refers to the negative emotional, cognitive, and physical repercussions of educational procedures that place excessive expectations on pupils (Aypay, 2011). Although school burnout involves negative attitudes about school (Salmela-Aro, 2017), it is studied using comparable dimensions to job burnout research.

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Education burnout is studied from three perspectives: adopting an indifferent attitude toward school, namely depersonalization, feeling inadequate as a student, and emotional tiredness (Salmela-Aro et al., 2009). Emotional exhaustion is characterized by a state of continual tiredness caused by excess and tension caused by strain. It comprises the student's persistent exhaustion and burnout with regard to school and academic work. Depersonalization occurs when a person loses interest in his work and does not consider it relevant (Aypay, 2011). It comprises a lack of relevant and productive educational and academic work, as well as an indifferent attitude. The student's sense of inadequacy is characterized as a lack of competence, success, and completion (Salmela-Aro et al., 2016). Inadequacy refers to pupils' unfavorable attitudes and beliefs regarding their abilities. In general, students' opinions of themselves, their abilities, and academic material have a detrimental impact on their motivation processes. As a result, effort and interest decline, and academic achievement suffers. Negative attitudes toward school and academic material in general can lead to burnout through behaviors such as truancy and absence as a result of this process.

Although school life serves as a facilitator in kids' learning processes, academic demands can generate stress, emotional distress, and academic issues (Chang et al., 2000). Burnout is being widely acknowledged as a problem that many university students face (Jacobs & Dodd, 2003). It is also argued that university students are especially vulnerable to burnout since they feel worry in several areas

(economic, relational, and professional) during their study (Schaufeli et al., 2002). University students are possible to be nearing the end of their educational careers and are exposed to a variety of pressures as they prepare to enter the workforce. Due to economic, job, and academic obstacles, students are more likely to burn out.

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Academic and non-academic variables can all contribute to school burnout. Students' high expectations for their own achievement (Kiuru et al., 2008) and poor family ties (Silvar, 2001) are examples of non-academic variables. Furthermore, the student's low motivation level (Walburg et al., 2016) and their inaccurate beliefs of what they can achieve (Lee et al., 2020) might take a part in the onset of school burnout.

School burnout may occur for a variety of reasons, including a mismatch between the learner's expectations of success and the expectations of others, such as peers and instructors (Yang & Farn, 2005), and pressure on the student as a result of the school's high assumptions and demands (Ryan, 2001). Although numerous academic and non-academic ideas are involved with school burnout, several schoolrelated aspects stand out. To begin with, low academic success and unpleasant sentiments about school have an impact on school burnout (Lee & Ashforth, 1996). Students acquire unfavorable attitudes about school and academic tasks as a result of time constraints for academic work (Salmela-Aro et al., 2008) and continual and intensive expectations (Kiuru et al., 2008). While low accomplishment and school involvement contribute to emotions of depersonalization and inadequacy, they are also linked to school burnout and academic success (Salmela-Aro et al., 2008). It has been proposed that adolescents who suffer school burnout is more probable to happen academic failure, dropout, and a variety of other adverse psycho-social outcomes (Salmela-Aro et al., 2009).

Aside from interactions inside the environment of the school, students' ties with their families have an impact on their school life. School burnout has been observed in children who have a poor relationship with their family (Silvar, 2001). Furthermore, the function of social support in the development of school burnout has been established (Aypay & Eryılmaz, 2011). It has also been shown that peer relationships are negatively associated with school burnout (Kiuru et al., 2008).

Teachers who create motivational objectives and bond with their students are seen to be protective factors against burnout (Crosnoe et al., 2004).

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School burnout signs include apathy toward school assignments, a sensation of exhaustion toward academic responsibilities, a sense of inadequacy, a drop in academic success, and a bad attitude toward school and school-related activities (Zhang et al., 2007). While these symptoms might be detected together or independently, they give signs concerning school burnout. Furthermore, signs such as poor social skills, low academic success, and school dropout all point to school burnout (Yang & Farn, 2005).

School burnout affects mental health and quality of life, depending on environmental or individual factors (Salmela-Aro & Upadyaya, 2012). Stress may cause school burnout in students of all academic levels (Adhiambo et al., 2011). School choices, academic stress, and fear may leave high school graduates emotionally exhausted. These negative school attitudes reduce kids' school belonging and increase school fatigue.

Educators have studied burnout in schools and universities (Grayson & Alvarez, 2008), school psychologists (Ross et al., 1989), and school managers (Koçak, 2009). According to studies on school staff, the school itself is a stressor (Chang et al., 2000; Friedman, 1999;). These study investigations sparked a debate about whether burnout, which is classified as a condition mostly associated with employment practices. Research showed that self-confidence, social networks of support, and female/male norms (Yang & Farn, 2005), learning environments (Dyrbye et al., 2009), enjoyment or complaint with the school (Baker & Maupin, 2009), the hours wasted in the school, and the essence of the syllabus (Bernhard, 2007) were efficient in expanding burnout.

Furthermore, research on school burnout in learners has largely focused on university students (Bernhard, 2007). In the footsteps of the early burnout studies, the studies have also placed "professions" in a major position. Schools teaching individuals for the health industry, particularly physicians and med school students have received particular attention (Çınar Tanrıverdi, 2022). As a result, studies involving secondary and high school children are few (Erturgut & Soyşekerci, 2010;

Vasalampi et al., 2009). Thus, the aim of this study is to explore the association between the aforementioned characteristics and school burnout in secondary and high school students by incorporating recent empirical data. Furthermore, the goal of this review is to summarize the many elements inside the school-related burnout construct that seem to modulate or regulate this link.

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This review tried to answer the following research questions:

1) What do current study findings reveal regarding the importance of the link between secondary and high school students and school burnout?

2) What mediators and moderators have been explored to identify the association between secondary and high school students and school burnout, and what findings have they produced?

3) What does longitudinal research reveal about the basis of the link between secondary and high school students and school burnout?

Methods

Identification of studies

A systematic literature review was selected as a search approach because of its ability to summarize existing understanding on a certain area by picking publications that meet predefined criteria (Eriksson & Lindstrom, 2005). Despite the vast research on school burnout (Byrne, 1991), the topic seems to have gotten surprisingly less attention among secondary and high school students. The review was built using principles that strive to guarantee that the material gathered best reflects the research question and most properly depicts the phenomenon under inquiry (Oxman, 1994). The search was adjusted using criteria for inclusion to limit the returned papers to those that might reply to the objectives of this existing literature. The first search began in September 2022, with content being collected and assessed for inclusion in October 2022. The search was performed in December 2022 to verify that published publications were included.

Figure 1 depicts a PRISMA flow diagram for the search and inclusion/exclusion procedures. The search results give a total of 3625 results. A





data extraction table was created to allow for the capture and tabulation of reviewrelevant information.

Table 1 – A Data Extraction Table

Databases: Web of Science (WoS), ERIC, Google Scholar, Scopus Search: "Secondary School Students" OR "Middle School Students" "High School Students" OR "Adolescents" AND "School Burnout" Limiters: All in English,2019-2022, Journal articles

Screening

The following inclusion and exclusion criteria were established to constrain the number of articles (see Table 2). Duplicates (n = 49) were separated, resulting in a final of (n) = 3576. As 3591 pieces of research did not match the inclusion criteria, the review comprised 38 articles.

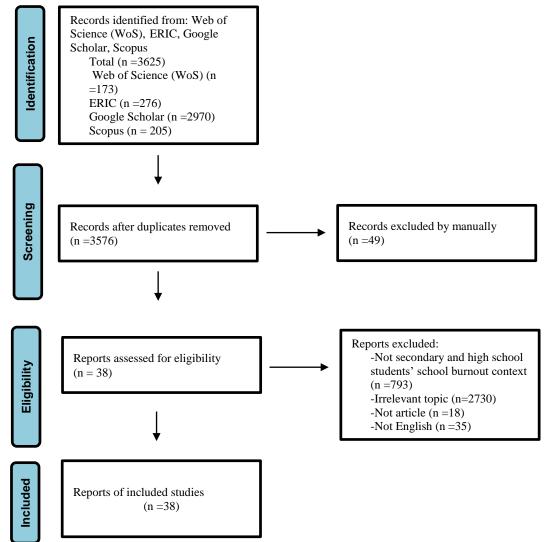
Eligibility and Inclusion

Following the removal of duplicate articles and those that did not fulfill the set inclusion criteria, the accepted articles were reviewed again, along with the abstracts and, if required, the entire articles. In this step, the eligibility of 38 studies was checked, and they were eventually chosen for inclusion in this review. There was risk of bias assessment since the existing methods comprised elements unique to intervention or longitudinal research.





Figure 1 – PRISMA Flow Chart of Research Considered in the Review



Collecting the data

The databases employed in this study include Web of Science (WoS), ERIC, Google Scholar, and Scopus. The phrases "secondary school students," "high school students," and "school burnout" were typed into the search field. The results indicated 3576 connections. The findings were then categorized depending on their accessibility, type of published paper, and criteria for inclusion and exclusion. 53 papers were excluded because they were not in article form (n = 18) or in English (n = 35). The search yielded 2730 publications that were unrelated to the study's aim. After reviewing the articles under the inclusion and exclusion criteria, 793

papers were eliminated because they did not reflect the secondary and high school environments. In conclusion, 38 publications were chosen from the 3576 findings for this review.

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Assessing the quality of the study

To ensure the quality of this study, journal articles from Web of Science (WoS), ERIC, Google Scholar, and Scopus were selected considering the framework criteria. Both the inclusion and exclusion criteria were defined. The articles would be determined based on both inclusion and exclusion criteria. This would assure the articles' relevancy while also retaining the review's objective. Table 2 outlines the criteria for inclusion and exclusion.

Inclusion criteria	Exclusion criteria
Articles published between 2019 and 2022	 Articles not published between 2019 and 2022
 Focus on secondary and high school students' school burnout 	Duplicated publications
 Keyword search in the 'title' and 'abstract' of papers 	Papers from conference proceedings, and book chapters
Papers presented as articlesResearch in English language	 No access to full publications and open access Studies in other languages

Synthesizing the evidence

To fulfill the initial goal of the review, a meta-analysis was carried out to establish the importance of the link between secondary and high school students; nevertheless, there were insufficient studies for each mediator or moderator variable to conduct a significant quantitative analysis. As a result, a qualitative examination of these mediators and moderators was conducted instead, which continues to give an understanding of the importance these factors bring to the knowledge of the link between secondary and high school students and school burnout.

Correlational findings

The other studies were omitted since they lacked the necessary correlational data or descriptive statistics, that might have yielded co-relational information. (Bilgiz & Peker, 2021; Fiorilli et al., 2020; Gabola et al., 2021; Grazia, 2022; Lehto et al., 2019; Macalka et al., 2022; Meylan et al., 2020; Molinari & Grazia, t.y.; Ponkosonsirilert et al., 2020; Read et al., 2022; Romano et al., 2021; Salmela-Aro et al., 2021; Salmela-Aro & Upadyaya, 2020; Teuber et al., 2021; Tomaszek & Muchacka-Cymerman, 2020; Widlund et al., 2020). Due to their contribution to mediation and moderation analyses, these studies were nonetheless featured in this study. The reported link between school burnout and academic achievement/performance was weak and unfavorable.

Experimental meta-analysis methods were used for this study, and the Comprehensive Meta-Analysis (CMA) program was utilized. The meta-analysis includes 12 studies from the 38 included in the review, totaling 21.452 individuals. These studies concentrated on the association between school burnout and academic achievement or academic well-being (Çam & Ögülmüs, 2021; Gabola et al., 2021; Güler & Bedel, 2022, Güngör ,2019; Martos Martínez et al., 2021; Özhan & Yüksel, 2021; Parviainen et al., 2021; Rimpelä et al., 2020; Savi Cakar & Uzun, 2021; Teuber et al., 2021; Tomaszek & Muchacka-Cymerman, 2020; Widlund et al., 2020; Yildirim & Koçak, 2022).

The other studies were omitted since they lacked the necessary correlational data or descriptive statistics that might have yielded causal information (Bilgiz & Peker, 2021; Fiorilli et al., 2020; Grazia, 2022; Meylan et al., 2020; Ponkosonsirilert et al., 2020; Salmela-Aro & Upadyaya, 2020; Teuber et al., 2021; Tomaszek & Muchacka-Cymerman, 2020). Due to their contribution to mediation and moderation analyses, these studies were nonetheless featured in this study. The reported link between school burnout and academic achievement and performance was weak and unfavorable (r= -0,166,95% CI [-0,403 - 0,071], p < .0001). See Fig. 2 for a forest plot.

Table	3 – Coi	nbined Stu	ıdy Findi	ngs Using F	Fixed and	Random	Effects M	odels
Model	Κ	Effect	S. E	Variance	Lower	Upper	Z	Р
		Size			Limit	Limit		
Fixed	12	0,414	0,015	0,000	-0,443	-0386	-28,214	0,000
effects								
random	12	-0,377	0,234	0,055	-0,836	0,082	-1,611	0,107
effects								

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Looking at the results of the fixed effects model of the research, it was determined that the effect size of the 12 studies whose data were used in the metaanalysis study was within the 95% confidence interval, the upper limit value was -0.386 and the lower limit value was -0.443, and the average effect size value of the study was -0.414. (-28,214, with p < 0,001), According to the results of Cohen's (1988) effect size classification scale, this effect size is insignificant. Looking at the results of the random effects model of the study, it was determined that the average effect size of the 12 studies whose data were used in the meta-analysis study was 0,082 at the upper limit value and -0.836 at the lower limit value at the 95% confidence interval, and the value of the average effect size of the study was -0.377. (z-1,611; p = 0,107). This value was found to be in the "insignificant effect size" range according to the classification made by Cohen (1988). According to this finding, the amount of school burnout has a greater influence on female in terms of gender characteristics. In other words, it has been determined that women have higher levels of school burnout than male.

Fig. 2 – A Forest Plot of the Meta-Analysis for Each Study

Study name	Std diff in means	Standard Error	Variance	Lower limit	Upper limit	Z- Value	p- Value		Std diff in	means ar	nd 95% Cl	_
Rimpelä et al.	-0,676	0,020	0,000	-0,715	-0,636	-33,717	0,000					
(2020)												
Martos Martínez et al. (2021)	-2,667	0,093	0,009	-2,849	-2,484	-28,666	0,000				1	1
Savi Cakar & Uzun (2021)	0,629	0,100	0,010	0,434	0,824	6,314	0,000					
Teuber et al. (2021)	0,303	0,062	0,004	0,183	0,424	4,930	0,000					
Güler&Bedel (2022)	0,804	0,043	0,002	0,720	0,888	18,780	0,000				•	
Çam&Ögülmüş (2021)	-0,132	0,061	0,004	-0,253	-0,012	-2,154	0,031		1	• 7_		
Özhan & Yüksel 2021)	-0,797	0,074	0,006	-0,942	-0,651	-10,717	0,000			∎ ■		
Güngör(2019)	0,345	0,106	0,011	0,138	0,552	3,266	0,001		₽			
Parviainen et al. (2020)	-0,772	0,055	0,003	-0,879	-0,665	-14,132	0,000		"	ا ا		
Tomaszek & Muchacka-	-1,218	0,155	0,024	-1,522	-0,913	-7,835	0,000			♦"		
Cymerman (2019)									- +			
Yildiz & Kiliç (2020)	-0,822	0,092	0,009	-1,003	-0,640	-8,88	0,000	-4,00	-2,00	0,00	2,00	4,00
Yildirim & Koçak (2022)	0,451	0,105	0,011	0,240	0,656	4,311	0,000		Favours A		Favours B	
Pooled Prediction Interval	-0,377 -0,377	0,234	0,055	-0,880 -2,249	0,082 1,494	-1,611	0,107					

Longitudinal studies

Five research studies (Grazia, 2022; Parviainen et al., 2021; Read et al., 2022; Salmela-Aro et al., 2021; Salmela-Aro & Upadyaya, 2020) gathered longitudinal data to investigate school burnout among secondary and high school students.

Grazia (2021) and Salmela-Aro (2021) show that school burnout can alter over time. School burnout was demonstrated to rise with duration in medium and high-performance groups, with no shift in school burnout levels in low performance groups in secondary school (Salmela-Aro, 2021) and from the initial year of a secondary school to the last year (Grazia, 2022). This implies that continuously low levels of school burnout result in improved academic achievement. Parviainen et al. (2020) also identified variations in weariness while evaluating accounting school burnout from the first to the final year of the school year, but these alterations were not assessed for importance.

Results from Salmela-Aro (2021) and Salmela-Aro and Upadyaya (2020) show that the duration at which school fatigue and engagement are evaluated determines the strength of their connection. Salmela-Aro (2021) discovered that involvement from the midpoint of a topic was inversely related to school burnout, with a significant association observed when tested previously in a topic. This supports the findings of

Grazia (2022), who discovered that school burnout analyzed at the conclusion of the term correlated worse with grades 6 and 7 than school burnout measured at the start of the term, and Obrentz (2012), who discovered that emotional engagement became a more important predictor of school burnout at grades 6 and 7. According to Read et al. (2022), students' degree of arithmetic abilities had a statistically meaningful indirect adverse influence on burnout in upper secondary education via the level of fatigue in Grade 6 in 4 out of 6 years. Furthermore, Parviainen et al. (2020) found that school burnout correlates with gender and that gender had a statistically significant indirect influence on burnout in upper secondary education, with girls experiencing a larger improvement in burnout when evaluated at the end of the educational term. Furthermore, the findings of Read et al. (2022) reveal that, as predicted, the general trend of School burnout (SB) rose from 2006 to 2019. Until 2011, the SB trend showed a rather flat tendency for females and even a fall in males, after which the SB began to climb dramatically among females and indicate some rise among boys.

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With findings indicating SB evaluated at one time-point strongly estimated term 1 and 2 progress after adjusting for prior education term progress, Parviainen et al. (2020) provide information on the probable durations of this link. Since the usual education terms does not encompass an entire year, forecasting academic success within a comparable time range might well be constrained.

The above results from the longitudinal study undertaken by Read et al. (2022) provide support for this concept, given published results that indicate that academic performance occurred at a single particular time that anticipated eventual school burnout. Nonetheless, rather than the cyclic feedback loop that was hypothesized, such a result was only recorded from one stage of performance to future assessments of school burnout. These results suggest that a very adaptable structure that is influenced by the educational setting may impact academic motivation and learning emotions related to achievement, that it is more strongly related to achievement after a short time from the start of the educational interaction, and that it may not precisely relate to performance over time. This conclusion is not strange considering that learners are most likely to discover more

about their scholastic talents as the learning experience progresses, which could be employed to assess school burnout.

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Mediating relationships

Seven of the included studies investigated interaction mediation (Bilgiz & Peker, 2021; Fiorilli et al., 2020; **Güngör,2019;** Macalka et al., 2022; Ponkosonsirilert et al., 2020; Veyis et al., 2019; Widlund et al., 2020).

Widlund et al. (2020) discovered that before learning, intentional and purposeful goal setting moderated the association between l (SB) and mathematical academic achievement. Cognitive variables such as anxiety and resilience (Fiorilli et al., 2020); academic stress and academic motivation (Veyis et al., 2019); mindfulness (Bilgiz & Peker, 2021); hope (Güngör, 2019); and self-compassion (Ponkosonsirilert et al., 2020); and time perspective indicators (Macalka et al., 2022).

In two separate studies, academic stress, characterized as perseverance and depression when facing challenging academic situations (Fiorilli et al., 2020; Macalka et al., 2022), and academic mindfullness, characterized as the level of effort and perseverance in the conducted study (Veyis et al., 2019), were discovered to partially and completely mediate the relationship between school burnout and academic achievement. In spite of the differences in the directional cues of the mediating association revealed across these studies, this finding supports a partial mediation of SB on the adverse link between academic procrastination and performance described by Veyis et al. (2019). Ultimately, deep cognition was discovered to entirely regulate the link between school burnout and performance (Macalka et al., 2021). These findings imply that students in advanced stages of school burnout perform academically worse due to the use of cognitive issues and low rates of concentration, which result in surface comprehension throughout the learning process and contribute to school anxiety.

Moderating relationships

Six studies (Güler & Bedel, 2022; Kalkan & Dagli, 2021; Karakaya et al., 2022; Özdogan Özbal, 2020; Özhan & Yüksel, 2021; Tomaszek & Muchacka-Cymerman, 2019; Yildiz & Kiliç, 2020) utilised moderating approaches to explore the association between school burnout and academic performance. 4 studies discovered that the link between school burnout and performance was moderated by Internet addiction (Tomaszek & Muchacka-Cymerman, 2019); emotional exhaustion (Yildiz & Kiliç, 2020); social justice leadership (Özdoğan Özbal, 2019); academic pressure (Güler & Bedel, 2022); student-teacher relationships (Özhan & Yüksel, 2021); school climate (Kalkan & Dağlı, 2021); and family problems (Karakaya et al., 2022).

The connection between school burnout and performance dropped when the quantity of school connectedness was low (Kalkan & Dağlı, 2021), suggesting a beneficial moderating impact. Moreover, modest levels of negative emotions (e.g., anxiety, humiliation) had no influence on the connection between school burnout and performance (in contrast to high levels that had a negative effect (Özhan & Yüksel, 2021), indicating a negative moderating effect.

People who had lower degrees of home burnout and either an excessive or minimal degree of school burnout, on the other hand, performed better academically (Özhan & Yüksel, 2021). This implies that people who are extremely burned out from home but have low degrees of school burnout perform less well as a consequence of the typical feelings associated with burnout from family, such as depression and anxiety, which may have an influence on performance (Kalkan & Dağlı, 2021). This could also be argued for people who are extremely burnt out from their families and have significant degrees of school burnout. As a result, high degrees of family participation in school might well be detrimental to high levels of school burnout, resulting in reduced school performance.

The rest research discovered that school burnout influenced the link between emotional tiredness and performance (Yildiz & Kiliç, 2020) and academic pressure on overall academic performance (Güler & Bedel, 2022). Low levels of social justice leadership have been connected to lower academic performance,

school alienation, and a negative moderating effect on school burnout (Özdoğan Özbal, 2019). School burnout has also been demonstrated to have a negative moderating effect on the connection between academic pressure and school experiences (Güler & Bedel, 2022). In this review, the association between final test grade and overall school performance grew as the degree of school burnout increased. This demonstrates the effect that a perceived lack of adequate education and loss of motivation in school as a conclusion of increased degree of school burnout might have on particular work performances, including completing examinations, which might not impact the entire course performance as evaluated by academic performance.

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Author	Features of the sample and its nation of origin	Design, outcome measures	Results
Bilgiz & Peker (2021)	<i>Country:</i> Türkiye <i>N:</i> 411 high school students-237 M -174 FM. <i>Mean Age:</i> -	Design: Correlational Outcome: Examination results	1-Mindfulness moderated the connection between the depersonalization feature of the school SB and social media.
Çam & Ögülmüş (2021)	<i>Country:</i> Türkiye <i>N:</i> 1068 high school ss- 397 F - 671 M <i>Mean Age:</i> 15.75	<i>Design: Causality</i> <i>relationships</i> <i>Outcome:</i> Examination results	 1- No statistically significant link between the stress and family support. 2- All of the routes from factors (including perceived social support from family and teachers, stress, academic suspension, and anxiety about failure) to school burnout were statically important. 3- The strongest association was discovered between school burnout and academic suspension, whereas the weakest connection was discovered between school burnout and perceived social support from family. 4- While perceived social support from parents and instructors had a detrimental influence on school burnout, factors like stress, academic suspension, and anxiety about failure had a positive impact. All of these factors were responsible for 31% of the alteration in school burnout (R2=.31).

Table 4 - Overview of Studies in the Systematic Review with Alphabetical Order



Demirci et al. (2020)	<i>Country:</i> Türkiye <i>N:</i> 283 ss (51 in the 6th grade, 82 in the 7th grade, 81 in the 8th grade ,69 in the 9th grade. 116 F and 167 M <i>Mean Age:</i> 13.36	<i>Design: Correlational Outcome:</i> Examination results	 1- Negative link between Facebook addiction and school involvement (r =46, p<.001). 2- Path analysis: School Burnout → Facebook Addiction → School Engagement (p < .01)
Farina et al. (2020)	<i>Country:</i> Italy <i>N:</i> 998 students(883F). <i>Mean Age:</i> <i>16.30(between 14-</i> <i>19)</i>	<i>Design: cross- sectional Outcome:</i> Examination results	1-Link between empathic concern and SB (r = 0.16, p < 0.001), whereas perspective taking negatively related to cynicism (r = 0.16, p 0.001). 2- Negative direct link between satisfaction with SB, supporting the function of social interactions (particularly with teachers) in alleviating SB (β = -0.91, p = 0.001). 3- Age directly and adversely related to satisfaction with school connections.
Farina et al. (2021)	<i>Country:</i> Italy <i>N:</i> 884 female high school students (age range 14–19) <i>Mean Age:</i> 16.2	<i>Design: Cross- sectional Outcome:</i> Examination results	1-High TEI emotionality and self- control aspects - highly related with low alexithymia group membership; high TEI emotional fatigue component of SB with high alexithymia group membership. 2- SB was shown to be related to alexithymia $r = 0.301$, $p < 0.001$).
Fiorilli et al. (2020)	<i>Country:</i> Italy <i>N:</i> 1235 adolescents (962 F, 273 M) <i>Mean Age:</i> 15.46	<i>Design: Cross- sectional Outcome:</i> Examination results	 1- TEI (trait emotional intelligence) has a substantial indirect influence on SB, which is mediated by anxiety and resilience. High TEI has less anxious feeling at school and more possible to be resilient, which lowered SB risk. 2- Prediction of TEI resilience favorably, and anxiety negatively.
Gabola et al. (2021)	<i>Country:</i> Italy and Switzerland, <i>N:</i> 840 adolescents Italian ss: 497 (257M; 240F); Swiss ss: 343 (174M; 169F) <i>Mean Age:</i> 14.98	<i>Design:</i> Comparative study- correlational <i>Outcome:</i> Examination results	 1-Main effect for age and nationality but not for gender, and no interaction between those variables. 2- Senior ss are at risk of experiencing school maladjustment in their school careers. SB risk, and its dramatic consequences, are higher for Italian students, both female and male.



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Güler &Bedel (2022)	<i>Country:</i> Türkiye <i>N:</i> 2538 secondary school students (1257 F and 1281 M <i>Mean Age:</i>	<i>Design:</i> <i>Correlational survey</i> <i>Outcome:</i> Examination results	1- Negative link between the SB and the academic pressure (r=- .373, p.01, p=.000); a negative link between the school engagement (r=511, p.01, p <=.000); and a negative link between the academic motivation (r=578, p<.01, p=.000). 2-Positive link between SB and gender variable (r=.266, p<.01, p=.000); as does the age (r=.110, p<.01, p=.000)
Grazia (2022)	<i>Country:</i> Italy <i>N:</i> 243 middle school students, 51.7% girls -T 1: 6th -T 2: 7 th grade <i>Mean Age:</i> -T 1: 11.68 -T2: 12.64	<i>Design: Longitudinal Outcome:</i> Examination results	Learners' enthusiasm with several aspects of school atmosphere decreased in the next education term. Predictors of higher emotional involvement and reduced burned out: better school climate
Gündoğan & Özgen (2020)	<i>Country:</i> Türkiye <i>N:</i> 364 middle school students 181 F and 183 M <i>Mean Age:</i> -	<i>Design:</i> Correlational <i>Outcome:</i> Examination results	 1-A link between school quality of life and SB. 2-School life quality is a negative predictor of SB (R2=.31, p<.001).
Güngör (2019)	<i>Country:</i> Türkiye <i>N:</i> 378 (172 M, 206 F) <i>Mean Age:</i> 12.34	<i>Design:</i> Cross- sectional <i>Outcome:</i> Examination results	 Males higher rates of SB than females. A difference in SB levels on perceived academic accomplishment, SB rose when perceived academic success declined. Three-regression studies found that social support predicted hope strongly. Therefore, hope acted as a bridge between social support and scholastic burnout. Greater level of social support reported higher levels of hope and reduced levels of SB.
Jagodics et al. (2022)	<i>Country:</i> Hungary <i>N:</i> 696 secondary school ss (238 F, 458 M) <i>Mean Age:</i> 16.2	<i>Design:</i> Cross- sectional <i>Outcome:</i> Examination results	1-Resources to be linked positively with burnout (0.24 <r<0.57), demands negatively associated 2- Positive link between school demands and SB, negative link between resources and symptoms.</r<0.57),
Kalkan & Dağlı (2021)	<i>Country:</i> Türkiye <i>N:</i> 667 middle school students <i>Mean Age:</i> -	<i>Design:</i> <i>Correlational</i> <i>Outcome:</i> Examination results	1-A positive link between school atmosphere and school belonging $(r = .59; p. < 01)$.



			2-A negative link between school belonging and SB ($r =54$; p. <01). 3-A negative link between school atmosphere and SB ($r =53$; p. <01).
Karakaya et al. (2022)	<i>Country:</i> Türkiye <i>N:</i> 326 secondary school students 178 F and 148 M <i>Mean Age:</i>	<i>Design: Survey Outcome:</i> Examination results	 1-Burnout from school activities, family burnout, feelings of incompetence at school, and loss of enthusiasm in school all had a link with general school attachment level. 2-School attachment level is somewhat and significantly related to burnout from school, family, sense of incompetence at school, and loss of enthusiasm in school.
Lanszki & Kunos (2021)	<i>Country:</i> Hungary <i>N:</i> 239 high school students <i>Mean Age:</i> -	<i>Design:</i> Correlational <i>Outcome:</i> Examination results	1-Learners' perspectives might be shifted by providing teachers with a tool, specifically DST, to control their students' fatigue.
Lehto et al. (2019)	<i>Country:</i> Finland <i>N:</i> 555 high school students (247 F) <i>Mean Age:</i> 16.83	<i>Design:</i> Cross- sectional <i>Outcome:</i> Examination results	1-Link between SB and daytime drowsiness, weariness, and poor sleep quality.2-No link between SB and sleep time, social jet lag and daily habits
Macałka et al. (2022)	<i>Country:</i> Poland <i>N:</i> 355 adolescents (61.6% F, 48.4% M) <i>Mean Age:</i> 18.5	<i>Design: Cross</i> <i>sectional</i> <i>Outcome:</i> Examination results	 1-In terms of depression, girls outperformed boys. 2- The findings revealed substantial connections between time perspective indicators, depression, and SB, in addition to a mediation impact of past time perspective and fatalistic current time perspective on depression via SB.
Martos Martínez et al. (2021)	<i>Country:</i> (Almeria) Spain <i>N:</i> 1287 high school students - 606 M, 681 F <i>Mean Age:</i> 15.11-aged 14 to 18	<i>Design: Cross- sectional Outcome:</i> Examination results	1-Girls had significantly higher mean scores in the exhaustion factor of burnout and self-efficacy than boys in a survey of high school ss. 2- Age did not have relation to sense of overall efficacy or outlooks for the future. 3- A positive link between exhaustion ($r = 0.07$; $p < 0.01$) and cynicism, and negative link for feeling of academic efficacy.
Meylan et al. (2020)	<i>Country:</i> Switzerland	Design: Cross- sectional	1-The three aspects of burnout with adversely connected with



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	<i>N:</i> 287 high school (146 F) <i>Mean Age:</i> 16.08	<i>Outcome:</i> Examination results	particular instructor and school- related instructional practices. Predictors of fatigue: Support for challenging students and teaching time
Molinari & Grazia (2021)	<i>Country:</i> Italy <i>N:</i> 1065 secondary school ss (49% F) <i>Mean Age:</i> 11.77	Design: cross- sectional Outcome: Examination results	 1-Four student profiles as cynically disengaged (5.9%), moderately disengaged (21.6%), peacefully involved (46.1%), and tensely involved (26.4%). 2-The initial 2 profiles - low levels of engagement and high levels of cynical burnout, with the former scoring higher. 3- The other two profiles -engaged pupils, with the latter also displaying emotions of anxiety and disillusionment. In terms of school environment impressions, the 4 profiles diverged, with peacefully involved children having the highest ratings and cynically alienated learners embodying the most critical attitudes.
Özdoğan Özbal (2019)	<i>Country:</i> Türkiye <i>N:</i> 382 high school ss (98F-283 M) <i>Mean Age:</i>	<i>Design:</i> <i>correlational survey</i> <i>Outcome:</i> Examination results	1-There is a fairly significant and unfavorable link between school fatigue and "social justice leadership" ($r =434$; $p<.01$). 2- Positive link between "school alienation" and "SB" ($r = .514$, p<.01). 3-A substantial link between independent and dependent variables. "Social justice leadership" had a substantial and moderate link ($r = 0.509$; $p<.01$) with school alienation and burnout.
Özhan & Yüksel (2021)	<i>Country:</i> Türkiye <i>N:</i> 842 high school students -440 F and 402 M <i>Mean Age:</i> 16.29	<i>Design:</i> <i>Correlational</i> <i>Outcome:</i> Examination results	1- Negative link between SB (r = - .42; p.001), student-teacher connections (r =52; p<.001), and family engagement to school (r = - .37; p.001), negative link with the peer interactions (r =25; p<.001). 2- Negative link between the learners' SB and their academic success (r =37; p<.001) and well-being (r =55; p<.001)
Parviainen et al. (2020)	<i>Country:</i> Finland <i>N:</i> 1544	<i>Design: Longitudinal</i> <i>Outcome:</i>	1-The indirect adverse influence on tiredness in upper secondary
	T1: 1298 ,50.0%M	Examination results	education through the amount of



	T2: 1274 ,49.0% M T3: 1292 ,49.6% M T4 :1544 ,48.7% M <i>Mean Age:</i> T1:12.74 -T4:16.66		fatigue in 6th grade (r= -0.36; p < 0.01). 2- Indirect influence between fatigue and gender in upper secondary schooling, with females experiencing a greater rise in fatigue (r= -0.32; p < 0.01.)
Ponkosonsirilert et al. (2020)	<i>Country:</i> Thailand <i>N:</i> 170 (143 F, 27 M) <i>Mean Age:</i> 16.84	Design: Cross- sectional Outcome: Examination results	 1-The high school respondents' stress levels were not very high; similarly, the amount of burnout indicated by these individuals was similar. 2- Self-compassion was discovered to mitigate this connection and might be regarded a protective factor for stress-related SB. The mediation may be interpreted through the cognitive affective model, which proposed that stress might lead to burnout as a consequence of people' unfavorable attitudes when coping with stress. 3- Self-compassion (entirely moderate the relationship between stress and school burnout).
Read et al. (2022)	<i>Country:</i> Finland <i>N:</i> 949,347 (secondary schools) <i>Mean Age: -</i>	<i>Design: Longitudinal Outcome:</i> Examination results	 1-The data reveal that, the overall trend of SB grew from 2006 to 2019. 2-A stable tendency for females and even a fall in males in SB until 2011, when it began to rise dramatically among females and exhibit some growth among males. 3- The interaction of socio - economic variables to 2019 gender-school level revealed that the majority of the socioeconomic impacts on SB were gender and time-dependent, but varied by something other than school level.
Romano et al. (2021)	<i>Country:</i> Italy <i>N:</i> 295 adolescents (78.6% F) <i>Mean Age:</i> 15.78	<i>Design:</i> <i>Correlational</i> <i>Outcome:</i> Examination results	 Perceived teacher emotional support dimensions at T1 and T2 were substantially and adversely linked with SB. Only teacher sensitivity at T1 substantially and adversely predicted emotional tiredness at T2, and the whole model explained 46% of its variation longitudinally.

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Rimpelä et al. (2020)	<i>Country:</i> Belgium, Germany, Finland, Italy, the Netherlands, and Portugal <i>N:</i> 11,015- 51.9% F and 48.1% <i>Mean Age:</i> 15.24	<i>Design:</i> <i>Correlational</i> <i>Outcome:</i> Examination results	1- Negative link between School Burnout (SB) and Self Efficacy (SE) (r = -0.32; p < 0.01). 2- Link between Learners' network status and academic well-being (popular learners: lower SB, greater SE; socially engaged learners: higher SE. 3- The greater the density of ties, the greater the likelihood of school burnout (r= 0.05; p < 0.01) and the lower the likelihood of schooling involvement (r= -0.05; p < 0.01).
Salmela-Aro &Upadyaya (2020)	<i>Country:</i> Finland <i>N:</i> 1038 F <i>Mean Age:</i> -	<i>Design:</i> Longitudinal <i>Outcome:</i> Examination results	1-Students who report elevated amounts of curiosity, grit, academic buoyancy, social engagement, and belongingness tend to be highly involved instead of stressed or burned out, and to be stressed rather than just burned out.
Salmela-Aro (2021)	<i>Country:</i> Finland <i>N:</i> 2755 <i>Sample 1:</i> 1381 elementary ss (40.7% F; 39.2% M, from 5th to 6th grade. Sample 2: 1374 middle school ss (40.0% F; 37.9% M 7th to 8th grade <i>Mean Age:</i> Sample 1: 10.83 Sample 2: 12.82	<i>Design:</i> Longitudinal <i>Outcome:</i> Examination results	 Link between socio-emotional abilities and students' academic well-being. Treatments for classroom engagement + and reduced SB +.
Savi Cakar & Uzun (2021)	<i>Country:</i> Türkiye <i>N:</i> 446 high school ss (235 F ,221 M) <i>Mean Age:</i> 15.49	<i>Design: Cross- sectional Outcome:</i> Examination results	 1- Positive link between teenagers' hazardous conduct and educator abuse (r=.51, p<.01) and SB (r=.30, p<.01), and a negative-link between their reckless activities and school attachment (r=37, p<.01). 2- Variation of overall and sub-dimension hazardous behavior score averages by gender, class rank, academic average, socioeconomic status, and family model factors
Tang et al. (2021)	<i>Country:</i> Finland <i>N:</i> 2462- 1296 (56.4% F) in the 7th	<i>Design:</i> Comparative study- correlational	1- Positive relationships with SB and loneliness ($r = 0.33$, $p < 0.001$) and depressive symptoms ($r =$

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CONHECIMENTO DIVERSIDADE

	grade ,1166 (57.4% F) in the 8th grade <i>Mean Age: -</i>	<i>Outcome:</i> Examination results	0.51, p< 0.001), as well as strong negative correlations with two components of grit (r = -0.40 , p 0.001). 2- Negative relationships between two aspects of grit and loneliness (r = -0.31 , p 0.001) and depressive symptoms (r = -0.27 , p< 0.001).
Teuber et al. (2021)	<i>Country:</i> China <i>N:</i> 1,083 high school students (47.5% F) <i>Mean Age:</i> 16.33	<i>Design:</i> Cross- sectional <i>Outcome:</i> Examination results	 Workload and academic demands were strongly connected to SB. Link between optimism and emotional burnout and cynicism; link between self-efficacy and cynicism. Negative link between self- esteem and burnout symptoms.
Tomaszek & Muchacka- Cymerman (2019)	<i>Country:</i> Poland <i>N:</i> 230 adolescents - 171 F ,59 M <i>Mean Age:</i> 18.35	<i>Design:</i> <i>Correlational</i> <i>Outcome:</i> Examination results	 Increased SB with increased Internet addiction and the link especially for boys. Gender predicted Internet addiction and reduced the connection between SB and Internet addiction. Parental fatigue: predictor of Internet addiction
Tomaszek & Cymerman (2020)	<i>Country:</i> Poland <i>N:</i> 230 adolescents (26% M), <i>Mean Age:</i> 18.25	<i>Design:</i> <i>Correlational</i> <i>Outcome:</i> Examination results	 No significant variations in the amount of problematic Internet usage between girls and boys and females higher SB. People with problematic Internet usage tendencies had more SB (particularly burnout from studying, parenting, and feeling inept in school).
Veyis et al. (2019)	<i>Country:</i> Türkiye <i>N:</i> 690 high school- 360 M- 330 F <i>Mean Age:</i> -	<i>Design:</i> <i>Correlational survey</i> <i>Outcome:</i> Examination results	1- Academic stress and SB - important predictors of academic motivation, with SB acting as a complete mediator between academic stress and academic motivation.
Widlund et al. (2020)	<i>Country:</i> Finland <i>N:</i> 966-9 th grade In 2016:464 ss (217 boys, 247 girls) In 2018: 502 ss (244 boys, 258 girls) 52% girls <i>Mean Age:</i>	<i>Design:</i> Comparative study- correlational	 1- A direct favorable influence of SB on both boys' and girls' educational ambitions, with no variations in the routes between genders. 2- Link between exhaustion reading-related professional goals for boys.



			3- Negative link between cynicism and educational aspirations for all gender ($\chi 2= 1.741$, p = 0.187). 3- For males, SB indirectly connected to educational goals via mathematics interest.
Yidirim & Koçak (2022)	<i>Country:</i> Türkiye <i>N:</i> 387 adolescents (188 athletes, 199 non-athletes) (187 F, 200 M) <i>Mean Age:</i> 15.9	<i>Design: Correlational Outcome:</i> Examination results	1-The openness degree of female students was found to be greater than that of male students 2- No significant variations in the students' levels of SB and self- regulation based on age. Among the sub-dimensions of emotional fatigue, non-athlete students had greater burnout levels.
Yildiz & Kiliç (2020)	<i>Country:</i> Türkiye <i>N:</i> 550 secondary school students (276 F and 274 M) <i>Mean Age 11.48</i>	<i>Design:</i> <i>correlational survey</i> <i>Outcome:</i> Examination results	1-SB ($r =40$, p.05), emotional fatigue ($r =34$, p<.05), depersonalization ($r =35$, p<.05), and low personal achievement ($r =38$, p<.05) had negative association with school attachment. 2- Failure and emotional tiredness were strong predictors of school attachment

Results and Discussion

A summary of the evidence

This study examined 38 current studies to determine whether there is a direct, indirect, or moderated connection between secondary and high school students' academic performance and school burnout. Overall, meta-analytic data show a somewhat negative relationship between school burnout and academic achievement, despite substantial variation between studies, which can be explained by differences in how school burnout and academic performance are operationalized across studies. Furthermore, it shows that the process through which school burnout affects academic performance is mediated by variables (e.g., academic stress, school atmosphere, school belonging, a lack of interest in school, and parental participation).

What do current study findings reveal regarding the importance of the link between secondary - high school students and school burnout?

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The research findings presented in this review show that there is a somewhat unfavorable link between school burnout and academic achievement. This conclusion is dependent on the meta-analytic data from 12 studies which revealed connections. This association shows that lower levels of school burnout are associated with greater levels of academic success. This appears to be due to the fact that learners who have stronger views of their academic abilities are more inclined to succeed than learners who do not have firm ideas in their academic abilities. Additional research indicates that students with lower levels of school burnout are more inclined to choose challenging tasks, persist throughout those challenging tasks, and adjust their learning strategies to more efficient ones if faced with a challenge (Güngör, 2019), promoting academic success. Understanding the impact of school burnout on academic achievement can help teaching staff structure curricula and build learning programs that support decreasing secondary or high school students' school burnout.

What mediators and moderators have been explored to identify the association between secondary and high school students and school burnout, and what findings have they produced?

Effort management and academic delay seam to moderate the association between school burnout and academic success among the various mediation routes studied. This demonstrates that, inside the presence of fatigue or other diversions, a teenager's ability to organize the quantity of time dedicated to learning activities promotes and explains the association between school burnout and academic progress. The greater a teenager's degree of school burnout appears, the less likely it is that energy will be used on a learning activity, yielded in a decrease in academic achievement. This is a plausible assumption supported by past research (Macalka et al., 2022). According to Fiorilli et al. (2020), anxiety and resilience negatively impacted the connection between school burnout and academic achievement, implying that resilience and anxiety in the learning process may damage adolescents' degrees of school burnout and later educational achievement.

Additionally, school burnout is associated with academic accomplishment in a variety of moderating interactions, with school burnout engaging with a variety of cognitive and non-cognitive variables to influence performance. Non-cognitive characteristics such as Internet addiction appear to be negatively moderating school fatigue (Tomaszek & Muchacka-Cymerman, 2019) and cognitive factors such as emotional exhaustion (Yildiz & Kiliç, 2020), with negative emotions moderating the school burnout and academic performance association (Güler & Bedel, 2022). Learner-instructor connections seem to mediate the association between school burnout and performance (Özhan & Yüksel, 2021) with increased amounts of neuroticism negatively influencing academic performance at both increased and decreased degrees of school burnout (Güler & Bedel, 2022).

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Overall, the current data point to a number of potential mediating mechanisms between school burnout and academic performance, the most prominent of which is motivational variable effort control. Nevertheless, a number of these mediating variables have yet to be duplicated or evaluated in comparison with other potential mediation routes in a more thorough context (Güler & Bedel, 2022; Veyis et al., 2019).

Implications

Considering results of the review, more study is needed to investigate the mediating factors that exist between burnout in middle and high school learners and their academic performance. The essence of the link between school burnout and other motivational and cognitive factors inside the school-related burnout paradigm, such as self-efficacy, is of special interest. Due to the diversity in study results on the directionality of this link, this is necessary. Considering that several of the examined studies indicated moderate connections between the factors, as well as evidence for their predictive usefulness in regression analyses, the possibility of a major interaction among them that effects school or academic performance is possible. A future study ought to consider perceptions of self-efficacy as well. Thus, self-efficacy may help pupils cope with stressful conditions at school. Recent research has shown that sentiments of self-efficacy throughout high school

relate to high school grades Martos Martínez et al., 2021; Rimpela et al., 2020). Earlier studies have shown that skills in attitudes and perceptions have an essential effect. Tang et al. (2021) discovered the interplay of negative cognitions such as insufficient academic competence and capability with pressures such as low-test scores might generate discomfort. Likewise, several cognitive styles, such as selfworth or attribution styles, mediated depressive symptoms (Macalka et al., 2022; Ponkosonsirilert et al., 2020).

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Coping strategies, particularly problem-solving coping, have shown promising results in stress management throughout puberty (Salmela-Aro & Upadyaya, 2020). And, as demonstrated by the study conducted by (Çam & Ögülmüs, 2021), this strategy may have a favorable influence on school-related burnout among adolescents, making it useful for ongoing studies.

According to Tomaszek and Cymerman (2020), disparities between family assumptions and actual self-performance by the learner caused internal instability. From this vantage point, a preventative method centered on parents may be worth investigating.

Limitations

While one disadvantage of this study is that it contained research on academic stress and school burnout, it is advised that these constructs are extremely comparable and connected (Salmela-Aro et al, 2009), they characterize these two constructs as a constant occurrence using the identical risk factors. Likewise, the fact that part of the research covered in this article focuses on teens on a vocational track whereas the main focus of this review is on school burnout among secondary and high school students may lead to confusion. Statistics from people studying in vocational courses, on the contrary hand, are offered in opposition to statistics from people studying in academic courses. As school burnout is a relatively new phenomenon investigated among secondary and high school students, the number of papers available for a review of the literature is possibly a little restricted. Nonetheless, it is relevant to describe current research within this context in an attempt to gain a basic understanding of the risk factors and psychopathologic

implications of this condition, to give suitable preventative indications, and, most importantly, to motivate future research in this subject.

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Conclusion

Burnout is a common topic in professional environments; it has also been explored in the educational environment in recent years. According to research, the problem has been linked to poor psychological and emotional well-being and academic performance. Related to establishing the significance of high degrees of school burnout in predicting lower degrees of academic achievement, this study identifies other factors that operate to attenuate or mediate this association. More study is required not just to gain a better knowledge of the risk variables and their consequences for mental health but also to create scales for assessing frequency and possible therapeutic factors. Self-efficacy treatments and coping methods are potentially intriguing future prospects.

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REFERENCES

Adhiambo W.M., Odwar, A.J. & Mildred, A.A. (2011). The relationship among school adjustment, gender and academic achievement amongst secondary school students in kisumu district Kenya. *Journal of Emerging Trends in Educational Research and Policy Studies, 2*(6), 493-497. https://journals.co.za/doi/abs/10.10520/EJC135461

Aypay, A. (2011). İlköğretim II. kademe öğrencileri için okul tükenmişliği ölçeği: Geçerlik ve güvenirlik çalışması. *Kuram ve Uygulamada Eğitim Bilimleri, 11*(2), 511-527. https://app.trdizin.gov.tr/makale/TVRFMk1qQTFOUT09/ilkogretim-iikademeogrencileri-

CONFICCIMENTO DIVERSIDADE



ISSN 2237-8049

Aypay, A., & Eryılmaz, A. (2011). Relationships of high school students' subjective well-being and school burnout. *International Online Journal of Educational Sciences, 3*(1), 181-199. <u>https://doi.org/10.17860/mersinefd.297590</u>

Baker, J. A., & Maupin, A. N. (2009). School satisfaction and children's positive school adjustment. In R. Gilman, E. S. Huebner, & M. J. Furlong (Eds.), *Handbook of positive psychology in the schools* (pp. 189–196). Routledge.

Bernhard, H. (2007). Survey of burnout among college music majors. *College Student Journal*, 41(2), 392-401.

Bilgiz, S., & Peker, A. (2021). The mediating role of mindfullnes in the relationship between school burnout and problematic smartphone and social media use. *International Journal of Progressive Education*, *17*(1), 68-85.

Byrne, B.M. (1991). Burnout: Investigating the impact of background variables for the elementary, intermediate, secondary and University educators. *Teaching and Teacher Education*, *7*, 197–209

Çam, Z., & Ögülmüs, S. (2021). Testing of a model on the school burnout among high school students and exploring the model's prediction level of grade retention. *International Journal of Curriculum and Instruction*, *13*(2), 950-985.

Chang, E. C., Rand, K. L., & Strunk, D. P. (2000). Optimism and risk for burnout among working college students: Stress as a mediator. *Personality and Individual Differences, 29,* 255-263. https://doi.org/10.1016/S0191-8869(99)00191-9.

Çınar Tanrıverdi, E. Yılmaz, S. Yerli, E.B., Aras, A., & Koşan, Z. (2022). Burnout levels of medical students in COVID-19 pandemic: A cross-sectional study. *New Trends in Medicine Science, 3*(1), 12-19.

Coded papers

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates

Cordes, C. L., & Dougerthy, T. W. (1993). A review and integration of research on job burnout. *Academy of Management Review, 18* (4), 621-659.

Crosnoe, R., Johnson, M. K., & Elder Jr, G. H. (2004). Intergenerational bonding in school: The behavioral and contextual correlates of student-teacher relationships. *Sociology of Education*, *77*(1), 60-81. https://doi.org/10.1177/003804070407700103

Demirci, I., Usta, F., Yildiz, B., & Demirtas, A. S. (2020). School burnout and school engagement in adolescents: The mediator and moderator role of Facebook



addiction. *Egitim Ve Bilim-Education and Science*, 45(204), 91-109. https://doi.org/10.15390/EB.2020.8377

Dyrbye, L. N., Thomas, M. R., Harper, W., Massie, F. S., Jr. Power, D. V., Eacker, A., et al. (2009). The learning environment and medical student burnout: A multicentre study. *Medical Education*, *43*, 274-282.

Eriksson, M., & Lindstrom, B. (2005). Validity of Antonovsky's sense of coherence scale: A systematic review. *Journal of Epidemiological Community Health*, *59*, 460–6.

Erturgut, R., & Soyşekerci, S. (2010). An empirical analysis on burnout levels among second year vocational schools students. *Procedia Social and Behavioral Sciences*, *2*, 1399-1404.

Farina, E., Ornaghi, V., Pepe, A., Fiorilli, C., & Grazzani, I. (2020). High school student burnout: Is empathy a protective or risk factor? *Frontiers in Psychology*, *11*, 897. https://doi.org/10.3389/fpsyg.2020.00897

Farina, E., Pepe, A., Ornaghi, V., & Cavioni, V. (2021). Trait emotional intelligence and school burnout discriminate between high and low alexithymic profiles: A study with female adolescents. *Frontiers in Psychology*, *12*, 645215. https://doi.org/10.3389/fpsyg.2021.645215

Fiorilli, C., Farina, E., Buonomo, I., Costa, S., Romano, L., Larcan, R., & Petrides, K. (2020). Trait emotional intelligence and school Burnout: The mediating role of resilience and academic anxiety in high school. *International Journal of Environmental Research and Public Health*, *17*(9), 3058. https://doi.org/10.3390/ijerph17093058

Friedman, I. A. (1999). Turning over schools into a healthier workplace: Bridging between professional self-efficacy and professional demands. In R. Vandenberghe & A. M. Huberman (Eds.), *Understanding and preventing teacher burnout* (pp. 166-175). Cambridge University Press.

Gabola, P., Meylan, N., Hascoet, M., De Stasio, S., & Fiorilli, C. (2021). Adolescents' school burnout: A comparative study between Italy and Switzerland. *European Journal of Investigation in Health Psychology and Education*, *11*(3), 849-859. https://doi.org/10.3390/ejihpe11030062

Grayson, J. L., & Alvarez H. K. (2008). School climate factors relating to teacher burnout: A mediator model. *International Journal of Research and Studies, 24*, 1349-1363.





ISSN 2237-8049

Grazia, V. (2022). A longitudinal study of school climate: Reciprocal effects with student engagement and burnout. *Psychology in the Schools*, *59*(8), 1521-1537. https://doi.org/10.1002/pits.22691

Güler, G., & Bedel, A. (2022). School burnout in middle school students: Role of problem-solving skills, peer relations and perceived school experiences. *International Journal of Psychology and Educational Studies*, *9*(2), 340-352.

Gündogan, S., & Özgen, H. (2020). The relationship between the quality of school life and the school burnout. *International Journal of Evaluation and Research in Education*, *9*(3), 531-538.

Güngör, A. (2019). Investigating the relationship between social support and school burnout in Turkish middle school students: The mediating role of hope. School Psychology International, 40(6), 581–597. https://doi.org/10.1177/0143034319866492

icin-okul-tukenmisligi-olcegi-gecerlik-ve-guvenirlik-cal

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. https://doi.org/10.1353/csd.2003.0028

Jagodics, B., Nagy, K., Szenasi, S., Varga, R., & Szabo, E. (2022). School demands and resources as predictors of student burnout among high school students. *School Mental Health*. https://doi.org/10.1007/s12310-022-09534-1

Kalkan, F., & Dagli, E. (2021). The Relationships between school climate, school belonging and school burnout in secondary school students. *International Journal of Contemporary Educational Research*, 8(4), 59-79.

Karakaya, M., Sariaslan, E., & Kahraman, N, B. (2022). Factor affecting secondary school students' level of school attachment: School Burnout. *International Journal of Scholars in Education*, *5*(1), 49-59.

Kiuru, N., Aunola, K., Nurmi, J.-E., Leskinen, E., & Salmela-Aro, K. (2008). Peer group influence and selection in adolescents' school burnout: A longitudinal study. Merrill-Palmer Quarterly, 54(1), 23–55. https://doi.org/10.1353/mpq.2008.0008

Koçak, R. (2009). Okul yöneticilerinin mesleki tükenmişlik düzeylerinin bazı değişkenler açısından incelenmesi. *Fırat Üniversitesi Sosyal Bilimler Dergisi, 19* (1), 65-83.

Lanszki, A., & Kunos, N. (2021). The use of digital storytelling to address School-Related Burnout among 10-11 Grade Students. *Journal of Educational Sciences*, *22*, 3-17.





Lee, M. Y., Lee, M. K., Lee, M. J., & Lee, S. M. (2020). Academic burnout profiles and motivation styles among Korean high school students. *Japanese Psychological Research*, *62*(3), 184-195. https://doi.org/10.1111/jpr.12251

Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, *81*(2), 123–133. https://doi.org/10.1037/0021-9010.81.2.123

Lehto, J. E., Kortesoja, L., & Partonen, T. (2019). School burnout and sleep in Finnish secondary school students. *Sleep Science*, *12*(1), 10.

Macalka, E., Tomaszek, K., & Kossewska, J. (2022). Students' depression and school burnout in the context of family network acceptance and deviation from balanced time perspective. *Education Sciences*, *12*. https://eric.ed.gov/?id=EJ1353764

Martos Martínez, A., Molero Jurado, M. del M., del Carmen Perez-Fuentes, M., Barragan Martin, A. B., Simon Marquez, M. del M., Tortosa Martinez, B. M., Sisto, M., & Gazquez Linares, J. J. (2021). Self-Efficacy, positive future outlook and school burnout in Spanish adolescents. *Sustainability*, *13*(8), 4575. https://doi.org/10.3390/su13084575

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Reviews Psychology*, *52* (1), 397-422.

Meylan, N., Meylan, J., Rodriguez, M., Bonvin, P., & Tardif, E. (2020). What types of educational practices impact school burnout levels in adolescents? *International Journal of Environmental Research and Public Health*, *17*(4), 1152. https://doi.org/10.3390/ijerph17041152

Moher, D., Shamseer, L., Clarke, M., D., Ghersi, A., Liberati, M., Petticrew, Shekelle, P., & Stewart, L. A. (2015). Preferred reporting items for systematic review and metaanalysis protocols (Prisma-p) 2015 Statement. *Systematic Reviews*, 4(1), 1–9.

Molinari, L., & Grazia, V. (2021). Students' school climate perceptions: Do engagement and burnout matter? *Learning Environments Research*. https://doi.org/10.1007/s10984-021-09384-9

Oxman, A. D. (1994). Systematic reviews: Checklists for review articles. *British Medical Journal*, *30*,648–51.

Özhan, M. B., & Yüksel, G. (2021). The effect of school burnout on academic achievement and well-Being in high school students: A holistic model proposal. *International Journal of Contemporary Educational Research*, 8(1), 145-162.

Parviainen, M., Aunola, K., Torppa, M., Lerkkanen, M.-K., Poikkeus, A.-M., & Vasalampi, K. (2021). Early antecedents of school burnout in upper secondary

UnilaSalle

ISSN 2237-8049

education: A five-year longitudinal study. *Journal of Youth and Adolescence*, *50*(2), 231-245. https://doi.org/10.1007/s10964-020-01331-w

Ponkosonsirilert, T., Laemsak, O., Pisitsungkagarn, K., Jarukasemthawee, S., Audboon, S., & Leangsuksant, T. (2020). Stress, self-compassion, and school burnout in Thai high school students. *International Journal of Adolescent Medicine and Health*.

Read, S., Hietajarvi, L., & Salmela-Aro, K. (2022). School burnout trends and sociodemographic factors in Finland 2006-2019. *Social Psychiatry and Psychiatric Epidemiology*, *57*(8), 1659-1669. https://doi.org/10.1007/s00127-022-02268-0

Rimpelä, A., Kinnunen, J. M., Lindfors, P., Soto, V. E., Salmela-Aro, K., Perelman, J., Federico, B., & Lorant, V. (2020). Academic well-Being and structural characteristics of peer networks in school. *International Journal of Environmental Research and Public Health*, 17(8), 2848. https://doi.org/10.3390/ijerph17082848

Romano, L., Consiglio, P., Angelini, G., & Fiorilli, C. (2021). Between academic resilience and burnout: The moderating role of satisfaction on school context relationships. *European Journal of Investigation in Health Psychology and Education*, *11*(3), 770-780. https://doi.org/10.3390/ejihpe11030055

Ross, R. R., Altmaier, E. M., & Russell, D. W. (1989). Job stress, social support, and burnout among counseling center staff. *Journal of Counseling Psychology*, *4*, 464-470.

Ryan, A.M. (2001). The peer group as a context for the development of young adolescent motivation and achievement. *Child Development*, *72*(4), 1135–1150. https://doi.org/10.1111/1467-8624.00338

Salmela-Aro, K. (2017). Dark and bright sides of thriving–school burnout and engagement in the Finnish context. *European Journal of Developmental Psychology*, *14*(3), 337-349. https://doi.org/10.1080/17405629.2016.1207517.

Salmela-Aro, K., & Tynkkynen, L. (2012). Gendered pathways in school burnout among adolescents. *Journal of Adolescence, 35*(4), 929-939. https://doi.org/10.1016/j.adolescence.2012.01.001Salmela-Aro, K., Kiuru, N., Pietikäinen, M., & Jokela, J. (2008). Does school matter? The role of school context in adolescents' school-related burnout. *European Psychologist, 13*(1), 12-23. https://doi.org/10.1027/1016-9040.13.1.12

Salmela-Aro, K., & Upadyaya, K. (2020). School engagement and school burnout profiles during high school—The role of socio-emotional skills. *European Journal of Developmental Psychology*, 17(6), 943-964. https://doi.org/10.1080/17405629.2020.1785860





Salmela-Aro, K., Kiuru, N., Leskinen, E., & Nurmi, J.-E. (2009). School burnout inventory (SBI). *European Journal of Psychological Assessment, 25,* 48–57. doi 10.1027/1015-5759.25.1.48

Salmela-Aro, K., Muotka, K., Alho, J., Hakkarainen, K., Lonka, K. (2016). School burnout and engagement profiles among digital natives in Finland: A personoriented approach. *European Journal of Developmental Psychology, 13*(6), 704–718. https://doi.org/10.1080/17405629.2015.1107542

Salmela-Aro, K., Upadyaya, K., Vinni-Laakso, J., & Hietajarvi, L. (2021). Adolescents' longitudinal school engagement and burnout before and during COVID-19-The Role of Socio-Emotional Skills. *Journal of Research on Adolescence*, *31*(3), 796-807. https://doi.org/10.1111/jora.12654

Savi Cakar, F., & Uzun, K. (2021). Teacher abuse, school burnout and school attachment as predictors of adolescents' risky behaviors. *Pegem Egitim Ve Ogretim Dergisi*, *11*(1), 217-258. https://doi.org/10.14527/pegegog.2021.007

Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology*, 33(5), 464-481. <u>https://doi.org/10.1177/0022022102033005003</u>

Silvar, B. (2001). The syndrome of burnout, self-image, and anxiety with grammar school students. *Horizons of Psychology*, *10*(2), 21–32. <u>http://psiholoska-obzorja.si/arhiv_clanki/2001_2/slivar.pd</u>

Tang, X., Upadyaya, K., & Salmela-Aro, K. (2021). School burnout and psychosocial problems among adolescents: Grit as a resilience factor. *Journal of Adolescence, 86*, 77-89. https://doi.org/10.1016/j.adolescence.2020.12.002

Teuber, Z., Nussbeck, F. W., & Wild, E. (2021). School burnout among Chinese high school students: The role of teacher-student relationships and personal resources. *Educational Psychology*, *41*(8), 985-1002.

Tomaszek, K., & Muchacka-Cymerman, A. (2019). Sex differences in the relationship between student school burnout and problematic internet use among adolescents. *International Journal of Environmental Research and Public Health*, *16*(21), 4107. https://doi.org/10.3390/ijerph16214107

Tomaszek, K., & Muchacka-Cymerman, A. (2020). Examining the relationship between student school burnout and problematic internet use. *Educational Sciences: Theory and Practice*, *20*(2), 16-31.

Turnispeed, D. L. (1998). Anxiety and burnout in the health care work environment. *Psychological Reports, 82,* 627-642.





Vasalampi, K., Salmela-Aro, K., & Nurmi, J. E. (2009). Adolescents' selfconcordance, school engagement, and burnout predict their educational trajectories. *European Psychologist, 14* (4), 332-341.

Veyis, F., Seçer, I., & Ulas, S. (2019). An investigation of the mediator role of school burnout between Academic stress and academic motivation. *Journal of Curriculum and Teaching*, 8(4), 46-53.

Walburg, V., Mialhes, A., & Moncla, D. (2016). Does school-related burnout influence problematic Facebook use? *Children and Youth Services Review*, 61, 327–331. <u>https://doi.org/10.1016/j.childyouth.2016.01.009</u>

Widlund, A., Tuominen, H., Tapola, A., & Korhonen, J. (2020). Gendered pathways from academic performance, motivational beliefs, and school burnout to adolescents' educational and occupational aspirations. *Learning and Instruction*, *66*, 101299. https://doi.org/10.1016/j.learninstruc.2019.101299

Yang, H. J., & Farn, C. K. (2005). An investigation the factors affecting MIS student burnout in technical-vocational college. *Computers in Human Behavior, 21*(6), 917-932. <u>https://doi.org/10.1016/j.chb.2004.03.001</u>

Yildirim, T., & Koçak, Ç. V. (2022). The relationship between sport, self-Regulation and school Burnout in High School Students. *Education Quarterly Reviews*, *5*(3), 421-430.

Yildiz, V. A., & Kiliç, D. (2020). Investigation of school burnout and school attachment among secondary school students. *Educational Sciences: Theory and Practice*, *20*(3), 44-55.

Zhang, Y., Gan, Y., & Cham, H. (2007). Perfectionism, academic burnout and engagement among Chinese college students: A structural equation modeling analysis. *Personality and Individual Differences*, 43(6), 1529-1540. https://doi.org/10.1016/j.paid.2007.04.010