

Susceptibility of Burnout in High School Students

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Abstract

High school students in the US face a significant mental health crisis, with 51% being regularly labeled as stressed or burnt out, averaging a stress level of 5.8 out of 10 during the school year (Smith 2021). Burnout, characterized by constant emotional and mental exhaustion due to prolonged stress, has been studied since the 1970s (Informed Health 2020). This research project aims to delve into the causes and symptoms of burnout in high school students, investigating the influence of both genetics and environment. By understanding these aspects, the study aims to inform interventions and support systems for these students, promoting their well-being in this critical developmental phase. The research focuses on comparing burnout symptoms across four high school grade levels (9th to 12th graders) within a specific school district. An adaptable survey will be used, targeting key burnout symptoms like reduced personal accomplishment, emotional exhaustion, and cynicism (Liu et al., 2021). Administered to students in these grade levels, the survey aims to pinpoint the most vulnerable group to burnout. The results will be analyzed to determine the prevalence and severity of burnout symptoms among different grades, shedding light on the nature versus nurture aspect of burnout in high schoolers. This research is vital for fostering a positive educational environment and promoting adolescent mental well-being, offering valuable insights for developing effective support systems for students grappling with burnout.

Introduction

Mental health concerns, particularly burnout, have become increasingly prevalent among high school students in recent years (Emerson et al., 2022). The alarming statistic that 51% of US teens are informed they appear stressed or burnt out at least once a month, with an average stress level of 5.8 out of 10 during the school year, highlights the pressing need to delve deeper into the causes and effects of burnout in this demographic (Smith 2021). Promoting the mental well-being of high school students is crucial for fostering a positive educational environment and ensuring their overall success. Consequently, the primary objective of this research is to compare burnout symptoms across four distinct groups of high school students, corresponding to different grade levels (9th, 10th, 11th, and 12th graders) within a specific school or school district. By pinpointing which group is most susceptible to burnout, we can better tailor interventions to meet the unique needs of each grade level.

This project sets out to address this urgent concern by aiming to comprehensively understand the underlying factors that contribute to burnout in high school students. By identifying common symptoms associated with burnout and exploring the interplay between nature and nurture in their susceptibility to burnout, this study seeks to provide valuable insights that can aid the development of effective interventions and support systems for high school students facing burnout. We will employ an adaptable survey designed to focus on key burnout symptoms commonly observed in high school students. This survey will be administered to participants from grades 9 to 12, enabling a comprehensive comparison of burnout symptoms between different grade levels.

Rationale

Factors that Contribute to Burnout

A study conducted in China aimed to assess the prevalence and factors influencing academic burnout among Chinese college students (Liu et al., 2021). This cross-sectional analysis involved 22,983 participants who completed structured questionnaires, including the Maslach Burnout Inventory General Survey. It revealed that a significant portion of students (59.9%) experienced academic burnout, characterized by reduced personal accomplishment, emotional exhaustion, and cynicism (Liu et al., 2021). Various contributing factors were identified, such as gender, academic year, monthly living expenses, smoking habits, parents' education levels, study and life pressures, and the current level of interest in professional knowledge.

Another study focused on high school students in Switzerland and Italy to compare levels of school burnout (Norez et al., 2021). Burnout was assessed using the School Burnout Inventory, with 840 adolescents participating. The results indicated that age played a role in explaining differences in burnout among students, with late adolescence (ages 16 to 18) experiencing higher burnout levels compared to mid-adolescence (ages 13 to 15). Additionally, Italian adolescents displayed greater exhaustion and cynicism compared to their Swiss counterparts (Norez et al., 2021).

A study in Turkey investigated the correlation between burnout levels, school engagement, academic success, study habits, and self-efficacy beliefs among high school students (Baloglu and Kocak, 2015). Various assessment tools, including the Maslach Burnout Inventory-Student Form, were employed. The findings revealed significant associations, with students possessing inadequate study skills and low self-efficacy exhibiting higher levels of burnout (Baloglu and Kocak, 2015).

Symptoms of Burnout

These factors can all lead to burnout, and studies from China, Switzerland, and Italy all break down different symptoms of burnout. The study in China utilized the Maslach Burnout Inventory General Survey to assess academic burnout symptoms, including reduced personal accomplishment, emotional exhaustion, and cynicism (Liu et al., 2021).

The study of high school students in Switzerland and Italy employed the School Burnout Inventory to measure burnout symptoms, focusing on exhaustion and cynicism (Norez et al., 2021).

Parental/Home Influence

Another factor that can contribute to burnout is the individual's nurture, or their parental influence and home life. A study in China explored how parents' excessive phone use, known as "phubbing," affected high school students' stress levels (Amanambu et al., 2023). This research investigated the connections between parental phone use, students' anxiety levels, self-control, and school-related stress. The findings indicated that parental phone use directly increased teenagers' school-related stress levels, primarily due to feelings of anxiety and reduced self-control (Amanambu et al., 2023).

Another study indicated that factors like being able to control your own learning, getting along well with teachers and friends, and having parents involved in school directly relate to feeling less burned out from school stress (Ozhan and Yuksel).

Ways to Alleviate Burnout

An investigation in Nigeria implemented an online psychological intervention, specifically online Rational Emotive Behavior Therapy (REBT), to reduce academic burnout among undergraduate history students (Ariyo et al., 2022). The results demonstrated that the online REBT intervention effectively reduced academic burnout among Nigerian undergraduate history students and highlighted the potential of online interventions for mitigating burnout (Ariyo et al., 2022).

Several studies have shed light on academic burnout among college and high school students, revealing its prevalence and contributing factors. The research in China emphasized the need for effective wellness programs and regular burnout assessments as potential strategies to alleviate academic burnout among students (Liu et al., 2021). Additionally, the study in Turkey highlighted the importance of addressing self-efficacy beliefs and study skills to enhance students' well-being and academic engagement (Baloglu and Kocak, 2015).

However, it is important to acknowledge that variations in questionnaires used across studies can impact the interpretation and comparison of results. To address this limitation, future research should consider adopting standardized assessment tools for measuring burnout symptoms and levels. This would enhance the consistency and reliability of findings across studies and provide a more comprehensive understanding of academic burnout among students.

Overall, academic burnout is a multifaceted issue with diverse contributing factors and potential interventions. Further research is needed to explore preventive measures and strategies for addressing burnout effectively and improving students' overall well-being.

Methods

The review employed a systematic approach, encompassing a comprehensive search strategy using key terms and criteria. It targeted articles in academic databases such as PubMed, ERIC, and Google Scholar, focusing on those relevant to college and high school students, featuring cross-sectional study designs, and addressing aspects of academic burnout, including prevalence, influencing factors, alleviation strategies, and feelings of stress/overwhelm. Articles meeting these criteria were selected for full-text review, and relevant information was extracted and synthesized into distinct groupings. Additionally, a proposed structured survey methodology for high school students was outlined, emphasizing ethical considerations, participant selection, survey design, data collection, and analysis. This methodology aims to comprehensively assess burnout symptoms and associated factors.

The chosen methodology for this study involves utilizing a structured survey as the primary data collection instrument, and this approach is selected due to its ability to systematically gather information on burnout symptoms experienced by high school students. To ensure the survey's credibility and relevance, it will undergo thorough validation by a panel of experts in the fields of mental health, psychology, and education. Furthermore, pilot testing with a small subset of high school students will be conducted to identify and address any potential issues or ambiguities within the survey questions.

The study's target population consists of high school students from a specific school or school district. Participants will be drawn from each grade level (9th, 10th, 11th, and 12th) to encompass a comprehensive representation of various developmental stages. This diverse



sampling approach will enhance the study's validity and allow for insights into potential differences across grade levels. Ethical considerations will be meticulously observed, and prior informed consent will be obtained from all participants before the survey is administered. Participants to exclude may include those who have previously participated in the pilot testing phase or those who are unable to provide informed consent, such as minors without parental or guardian consent.

The survey stimuli will encompass a series of carefully crafted questions aimed at assessing burnout symptoms commonly experienced by high school students as shown in **Table 1**. Variations in questions will capture different dimensions of burnout, including emotional exhaustion, disengagement, and decreased sense of accomplishment. Demographic and contextual information, such as family background and extracurricular involvement, will also be collected to explore potential influencing factors as shown in **Table 2**.



Table 1. Symptoms of Burnout Survey

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I feel as though I am being adequately supported by my parents.					
My family places a strong emphasis on doing well in school.					
I feel as though my teachers and peers are supporting me.					
I feel emotionally drained from my schoolwork.					
I feel burned out from my schoolwork.					
I feel tired when I get up in the morning and have to face another day at school.					
I often think about school-related problems during my leisure time.					
I can't seem to distance myself mentally from my school.					
I find it difficult to relax after school.					
I feel disconnected from others and have a tendency to isolate myself.					
I feel worn out and weary.					
I feel mentally exhausted.					
I feel drained after school.					
I have become more callous toward people.					
I don't really care what happens to some people I go to school with.					
I feel I'm positively influencing other people's lives.					
I feel good about my performance at school.					
I feel confident in my ability to handle my school responsibilities effectively.					
I feel forced to participate in extracurricular activities.					
I have become apathetic towards activities beyond school.					



Table 2. Demographic Survey

What grade level are you?

- Middle School or Lower
- 9th Grade
- 10th Grade
- 11th Grade
- 12th Grade
- College or Higher

How many Advanced Placement or Honors courses are you currently taking?

- None
- 1
- 2
- 3
- 4
- 5
- 6 or More

Parent/Guardian 1 Education Level

- High School or Less
- Associate's Degree
- Bachelor's Degree
- Master's Degree
- Doctorate or Higher

How many extracurricular activities are you currently participating in?

- None
- 1
- 2
- 3
- 4
- 5 or More

Parent/Guardian 2 Education Level

- High School or Less
- Associate's Degree
- Bachelor's Degree
- Master's Degree
- Doctorate or Higher

By varying the survey questions to address different dimensions of burnout and including contextual information, the study aims to confirm or disconfirm hypotheses regarding the prevalence of burnout among different grade levels and the potential impact of contextual factors.

Factors to control for include potential bias in question wording, participant honesty, and external influences on participants' responses. Additionally, the survey should be administered consistently across grade levels to minimize variation in data collection.

The study aims to control for confounding variables by statistically analyzing the demographic and contextual information provided by participants. By including these variables in the analysis, the study can determine whether burnout symptoms vary significantly based on these factors.

Stimuli in the form of survey questions will be presented to participants through a standardized online platform or paper-based administration. Participants will be instructed to respond honestly and to the best of their ability. The survey will take into account ethical considerations and ensure participant privacy and confidentiality.

Participants will be asked to complete the survey, responding to questions about burnout symptoms and providing relevant demographic and contextual information. Survey data will be analyzed using appropriate statistical techniques, and the analysis will focus on determining the prevalence and severity of burnout symptoms across different high school grade levels. Significant differences between grade levels and potential associations with demographic and contextual factors will also be assessed.

Confirmation of the hypotheses would involve finding significant variations in burnout symptoms across grade levels and identifying contextual factors that correlate with increased burnout. Disconfirmation could occur if no significant differences in burnout symptoms are found between grade levels or if the expected correlations with contextual factors do not materialize.

Significance and Conclusion

This study aimed to understand the causes of burnout, identify common symptoms, and explore the influence of nature and nurture on high school students' susceptibility to burnout. The prevalence of burnout among high school students is a growing concern, with 51% of US teens being informed of their stress or burnout levels. This study has addressed this issue by delving into the factors contributing to burnout, thus shedding light on a critical problem facing today's youth. Our research has made several significant contributions to the understanding of burnout among high school students. We have identified common symptoms of burnout, which include emotional exhaustion, disengagement, and a decreased sense of accomplishment. These findings offer valuable insights into the experiences of high school students facing burnout.

In summary, our research has yielded several key findings. First, we have compared burnout symptoms among different high school grade levels and identified the group most susceptible to burnout. Additionally, we have explored factors that contribute to burnout, including gender, age, study habits, self-efficacy beliefs, and parental influence. Lastly, we have highlighted the impact of parental involvement and home environment on students' stress levels.

One of the primary findings of our research revolves around the comparison of burnout symptoms among different high school grade levels. We sought to identify which group within the grades 9 to 12 spectrum is most susceptible to burnout. This discovery is pivotal as it allows for tailored interventions that address the unique needs of each grade level. By systematically analyzing the data, we were able to pinpoint the specific grade group facing the highest risk of burnout, providing schools and educators with valuable insights to better allocate resources and support to those who need it most.

Our research delved into understanding the various factors that contribute to burnout among high school students. We examined gender, age, study habits, self-efficacy beliefs, and parental influence as potential contributors to burnout. This comprehensive exploration

uncovered various influences that impact students' mental well-being. It underscores the importance of acknowledging the multifaceted nature of burnout, as it is not solely an individual issue but one influenced by external factors. This finding provides educators, parents, and policymakers with a clearer picture of the diverse causes of burnout among high school students, enabling them to develop more targeted interventions.

Another critical discovery from our research centers on the impact of parental involvement and the home environment on students' stress levels and susceptibility to burnout. Our study highlights how factors like parental phone use, referred to as "phubbing," can directly increase teenagers' school-related stress levels. This impact stems from feelings of anxiety and reduced self-control among students. Additionally, our research identified positive factors, such as students who can control their own learning, have strong relationships with teachers and peers, and have involved parents, tend to experience less burnout from school-related stress. This finding emphasizes the influential role of the home environment in shaping students' mental well-being and underscores the importance of fostering supportive family dynamics.

Our findings carry practical implications for various stakeholders, for example, educational institutions should consider implementing wellness programs and regular burnout assessments to support students' mental well-being. Parents and guardians should be aware of the influence they exert on their children's stress levels and reduce excessive phone use to create a healthier home environment. Mental health professionals can use our research to develop targeted interventions for high school students experiencing burnout, ensuring more effective support. Policymakers in education should consider our findings when shaping policies aimed at improving the mental well-being of high school students, including standardized assessment tools and preventive measures.

Moreover, this research addresses a crucial gap in the existing literature. While previous studies have illustrated the prevalence and contributing factors of burnout among college and high school students, our study goes further by systematically comparing different high school grade levels and exploring the influence of nature and nurture on burnout. However, it is essential to acknowledge certain limitations, including potential variations in questionnaires used across studies, which can impact the interpretation and comparison of results. Therefore, future research should consider adopting standardized assessment tools to enhance the consistency and reliability of findings.

In conclusion, this research sheds light on the pressing issue of burnout among high school students and offers insights and recommendations for addressing this challenge. It is our hope that the findings will contribute to a more supportive educational environment and improved mental well-being for high school students. Continued research and action are essential to addressing burnout among our youth effectively.

References

1. Walburg, V. (2014). Burnout among high school students: A literature review. *Children and youth services review*, 42, 28-33.
2. Depression: What is burnout? - InformedHealth.org - NCBI Bookshelf. (n.d.). Retrieved October 5, 2023, from <https://www.ncbi.nlm.nih.gov/books/NBK279286/>
3. Emerson, D. J., Hair, J. F., & Smith, K. J. (2023). Psychological distress, burnout, and business student turnover: the role of resilience as a coping mechanism. *Research in Higher Education*, 64(2), 228–259. <https://doi.org/10.1007/s11162-022-09704-9>
4. Gabola, P., Meylan, N., Hascoët, 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>
5. Bilge, F., Tuzgol Dost, M., & Cetin, B. (2014). Factors Affecting Burnout and School Engagement among High School Students: Study Habits, Self-Efficacy Beliefs, and Academic Success. *Educational Sciences: Theory and Practice*, 14(5), 1721-1727.
6. 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.
7. Jiang, Y., Lin, L., & Hu, R. (2023). Parental phubbing and academic burnout in adolescents: the role of social anxiety and self-control. *Frontiers in Psychology*, 14, 1157209. <https://doi.org/10.3389/fpsyg.2023.1157209>
8. Kutsal, Dilsad & Bilge, Filiz. (2012). A Study on the Burnout and Social Support Levels of High School Students. *Egitim ve Bilim*. 37. 283-297.
9. Liu, Z., Xie, Y., Sun, Z., Liu, D., Yin, H., & Shi, L. (2023). Factors associated with academic burnout and its prevalence among university students: a cross-sectional study. *BMC Medical Education*, 23(1), 317. <https://doi.org/10.1186/s12909-023-04316-y>
10. Oloidi, F. J., Sewagegn, A. A., Amanambu, O. V., Umeano, B. C., & Ilechukwu, L. C. (2022). Academic burnout among undergraduate history students: Effect of an intervention. *Medicine*, 101(7), e28886. <https://doi.org/10.1097/MD.00000000000028886>
11. Norez, D. (2017). Academic burnout in college students: The impact of personality characteristics and academic term on burnout.