

The Influence of Social Support and Growth Mindset on Academic Burnout in High School Students at SMA Negeri 11 Medan

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ABSTRACT

This study aims to explore the impact of two key factors social support and growth mindset on academic burnout among students at SMA Negeri 11 Medan. Understanding these factors is crucial for developing strategies to prevent burnout and promote better academic outcomes. The sample consisted of 400 students from grades X and XI, selected through purposive sampling. These results emphasize the importance of social support and growth mindset in preventing academic burnout. Schools should enhance their counseling and mentoring systems, foster open communication between students and teachers, and integrate growth mindset strategies into the curriculum. By promoting a supportive environment and encouraging a growth-oriented approach, students can better manage academic stress and improve their overall well-being.

INTRODUCTION

Adolescence is a critical transition period marked by significant biological, cognitive, and social role changes (Sawyer et al., 2018). This phase, often described as emotionally turbulent (Santrock, 2007), is associated with an increased risk of developing psychological issues (Andersen & Teicher, 2008). Adolescents spend much of their time at school, where they face various academic demands, engage in extracurricular activities, and form their social identities (Eccles & Roeser, 2011). Schools play a vital role in the social development of adolescents, influencing their psychological well-being and identity formation (Ali & Asrori, 2014). However, academic pressure is a significant stressor, and prolonged exposure to academic stress can lead to academic burnout (de Anda et al., 2000; Gao, 2023). This stress can result in negative outcomes such as reduced academic performance, difficulty concentrating, and emotional strain (Rahmawati, 2017).

Academic burnout is a multidimensional concept that includes emotional exhaustion, cynicism, and a sense of inefficacy (Salmela-Aro et al., 2009). It is a widespread issue that affects students' mental health and academic success (Rahmatpour et al., 2019). Academic burnout is commonly triggered by high academic demands, long study hours, and low academic achievement (Rahmawati, 2017). This condition can also be exacerbated by a lack of social support, which is essential for managing academic stress (Lin & Huang, 2013). Furthermore, the presence of a fixed mindset—where individuals believe their abilities are static and cannot be improved—has been shown to contribute to burnout (Dweck, 2014). Students with a growth mindset, on the other hand, tend to exhibit better resilience and coping strategies, making them less susceptible to burnout (Nieuwenhuis et al., 2023).

Social support plays a crucial role in helping individuals cope with academic stress. It can come from various sources, including family, peers, and teachers, and has been linked to better mental health and academic success (Bartholomay & Sifers, 2016). Positive social interactions not only reduce stress but also promote well-being and academic engagement (Ozbay et al., 2007). Additionally, growth mindset—the belief that intelligence and abilities can be developed through effort and perseverance—has been shown to mitigate the effects of academic burnout. Students with a growth mindset view challenges as opportunities for learning, making them more motivated and better equipped to cope with academic difficulties (Dweck, 2014; Jach et al., 2018). These students tend to display higher levels of academic resilience, perseverance, and adaptive coping strategies when facing setbacks (Nieuwenhuis et al., 2023).

A preliminary survey conducted on 30 students revealed that 90% of the respondents reported experiencing academic burnout. Among those, 92.59% identified the lack of adequate social support as a primary factor contributing to their burnout. This included insufficient emotional, practical, and informational support from family, peers, and teachers, which made them feel undervalued and overwhelmed by academic pressures. Furthermore, 85.19% of students indicated that their poor growth mindset, characterized by a belief in fixed abilities, also played a significant role in exacerbating their academic burnout.

These findings highlight the critical role of social support and mindset in influencing the mental well-being of students. The results underscore the need for interventions aimed at enhancing social support networks and fostering a growth mindset to help students cope with academic challenges effectively. This study explores the influence of social support and growth mindset on academic burnout at SMA Negeri 11 Medan, aiming to provide valuable insights into strategies for improving students' mental health and academic outcomes.

LITERATURE REVIEW

Adolescence is a critical transition period marked by significant biological, cognitive, and social role changes (Sawyer et al., 2018). This phase, often described as emotionally turbulent (Santrock, 2007), is associated with an increased risk of developing psychological issues (Andersen & Teicher, 2008). Academic burnout is a multidimensional concept that includes emotional exhaustion, cynicism, and a sense of inefficacy (Salmela-Aro et al., 2009). It is a widespread issue that affects students' mental health and academic success (Rahmatpour et al., 2019).

METHODOLOGY

This study uses a quantitative approach with multiple regression techniques to analyze the influence of social support and growth mindset on academic burnout. The dependent variable in this study is academic burnout, which is measured through three main aspects: physical and mental exhaustion, cynicism towards the meaning of education, and a sense of inadequacy. The independent variables examined are social support, which includes perceived support from family, friends, and other significant individuals, as well as growth mindset, which refers to the belief that abilities can develop through effort.

The population of this study consists of students from SMA Negeri 11 Medan, totaling 1,042 students, with a sample size of 400 students selected using purposive sampling from grades X and XI. Data collection was conducted using Likert scales designed to measure levels of academic burnout, social support, and growth mindset. The academic burnout scale used the School Burnout Inventory (Salmela-Aro et al., 2009), the social support scale used the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1990), and the growth mindset scale used the Growth Mindset Scale (Rahmania et al., 2022).

All instruments used have been tested for validity and reliability, with results indicating high internal consistency (Cronbach's Alpha values above 0.80). The research procedure was divided into three stages: the preparation stage, which included literature review, sample size determination, and permission for scale usage; the data collection stage, which involved distributing the scales to the selected participants; and the data processing stage, which involved checking data completeness, scoring, and analysis using SPSS. The collected data were analyzed using univariate analysis to describe respondent characteristics, bivariate analysis with chi-square tests to evaluate relationships between variables, and multivariate analysis with logistic regression to identify the influence of independent variables on the dependent variable.

RESEARCH RESULT AND DISCUSSION

The following table provides a detailed overview of the gender, age, and grade distribution of the participants in this study at SMA Negeri 11 Medan. Regarding gender, 55% of the respondents were male and 45% were female, indicating a balanced representation. In terms of age, the majority of respondents were typical for high school students, with 25.3% aged 16, 25.0% aged 17, 26.5% aged 18, and 23.3% aged 19. This age range reflects the typical composition of high school students, allowing the study to explore the impact of factors such as social support and growth mindset across different age groups. The grade distribution was also nearly balanced, with 48.8% in grade X and 51.2% in grade XI, ensuring the study reflects experiences from both grade levels. These demographic characteristics provide a solid foundation for analyzing how these variables interact in the academic context, contributing to insights for educational policy and student well-being at SMA Negeri 11 Medan.

Table.1 Insights for Education Policy and Student Welfare at SMA Negeri 11 Medan.

Variable	Frequency	Percentage
Gender		
Male	220	55.0
Female	180	45.0
Ages		
16 years	101	25.3
17 years	100	50.2
18 years	106	76.8
19 years	93	23.3
Grades		
X	195	48.8
XI	205	51.2

The following table shows the frequency distribution of academic burnout categories among students at SMA Negeri 11 Medan. The data is divided into three categories: low, moderate, and high, based on a specific formula. Each category indicates the number of respondents experiencing a certain level of burnout, along with their percentage of the total sample. This table provides an overview of how many students experience varying levels of burnout, from low to high. According to the table, the majority of respondents, 276 students (69.0%), fall into the moderate category, indicating that most students experience a moderate level of burnout. The low category includes 75 students (18.8%), meaning only a small portion of respondents have a burnout score below 27. Meanwhile, only 49 students (12.3%) are in the high category, with burnout scores above 38. In total, there are 400 respondents across these three categories.

Table.2 Frequency Distribution of Academic Burnout Categories in Students at SMA Negeri 11 Medan

Formula	Category	Frequency	Percentage (%)
$X < 27$	Low	75	18,8
$28 \leq X \leq 37$	Moderate	276	69,0
$X > 38$	High	49	12,3
Total		400	100

The following table displays the frequency distribution and percentage of social support categories among students at SMA Negeri 11 Medan. The data is grouped into three categories: low, moderate, and high, representing the level of social support received by the students. Each category shows the number of respondents and their percentage in the analyzed population. This table provides an overview of the variation in social support among the students in the study. The table indicates that the majority of students, 265 (66.3%), fall into the moderate category, showing that most students receive a fairly adequate level of social support. A total of 69 students (17.3%) are in the low category, indicating a lower level of social support. Meanwhile, 66 students (16.5%) are in the high category, signifying stronger support from their environment. The total number of respondents analyzed in this table is 400 students.

Table.3 Displays the Frequency Distribution and Percentage of Social Support Categories Among Students at SMA Negeri 11 Medan

Formula	Category	Frequency	Percentage (%)
$X < 40$	Low	69	17,3
$41 \leq X \leq 54$	Moderate	265	66,3
$X > 55$	High	66	16,5
Total		400	100

The following table presents the frequency distribution and percentage of growth mindset categories among students at SMA Negeri 11 Medan. The data is grouped into three categories: low, moderate, and high, reflecting the students' understanding and application of the growth mindset concept. Each category shows the number of respondents and their percentage in the analyzed population. This table provides an overview of the variation in students' attitudes and mindsets toward personal development. The table shows that the majority of students, 273 (68.3%), fall into the moderate category, indicating that most students have a fairly good attitude and mindset toward personal growth. The low category includes 71 students (17.8%), suggesting that they have a limited understanding and application of the growth mindset concept. Meanwhile, 56 students (14.0%) are in the high category, signifying a very positive mindset toward learning and self-development. The total number of respondents analyzed in this table is 400 students.

Table.4 Presents the Frequency Distribution and Percentage of Growth Mindset Categories Among Students at SMA Negeri 11 Medan

Formula	Category	Frequency	Percentage (%)
$X < 23$	Low	71	17,8
$24 \leq X \leq 33$	Moderate	273	68,3
$X > 34$	High	56	14,0
Total		400	100

The table shows the relationship between social support and academic burnout categories among students at SMA Negeri 11 Medan. Data is categorized into low, moderate, and high social support, with corresponding academic burnout levels. Among students with high social support, 18.8% experience low burnout, 56.5% moderate burnout, and 24.6% high burnout. In the moderate social support group, 72.5% have moderate burnout, 18.1% low, and 9.4% high. For low social support, 21.2% have low burnout, 68.2% moderate, and 10.6% high. Statistical analysis reveals a significant relationship ($p = 0.012$) between social support and academic burnout.

Table.5 The Relationship Between Social Support and Academic Burnout Categories Among Students at SMA Negeri 11 Medan

Social Support	Academic burnout category						p - value
	Low		Moderate		High		
	n	%	n	%	n	%	
Low	13	18,8	48	18,1	14	21,2	0.012
Moderate	39	56,5	192	72,5	45	68,2	
High	17	24,6	25	9,4	7	10,6	

The table presents the analysis of the relationship between growth mindset and academic burnout categories among students at SMA Negeri 11 Medan. Data is categorized into low, moderate, and high growth mindset, showing the distribution of academic burnout levels (low, moderate, and high). For respondents with a low growth mindset, most experienced moderate academic burnout (19.0%), followed by low (16.9%) and high (19.6%) burnout. In the moderate growth mindset category, the majority had moderate burnout (69.2%), followed by low (70.4%) and high (66.1%) burnout. Respondents with a high growth mindset also showed a predominance of moderate burnout (11.7%), followed by low (12.7%) and high (14.3%) burnout. Despite the predominance of moderate burnout across all categories, the bivariate analysis showed a p-value of 0.971, indicating no significant relationship between growth mindset and academic burnout. Therefore, growth mindset does not significantly affect academic burnout in this study.

Table.6 presents the Analysis of the Relationship Between Growth Mindset and Academic Burnout Categories Among Students at SMA Negeri 11 Medan

Growth Mindset	Academic burnout category						p - value
	Low		Moderate		High		
	n	%	n	%	n	%	
Low	12	16,9	52	19,0	11	19,6	0.971
Moderate	50	70,4	189	69,2	37	66,1	
High	9	12,7	32	11,7	8	14,3	

The multinomial logistic regression analysis reveals that social support and growth mindset both contribute to the probability of academic burnout in students at SMA Negeri 11 Medan. In the first regression equation (Low/High), the constant value of -0.916 is negative and not significant ($p = 0.322$), indicating that low social support and growth mindset increase the likelihood of high academic burnout. The regression coefficient for social support (0.656) is positive and significant ($p = 0.042$), meaning that low social support increases the probability of high academic burnout. In the second regression equation (Medium/High), the constant value of 0.551 is positive but not significant ($p = 0.476$), showing that medium social support and growth mindset still result in a higher probability of academic burnout. The coefficient for social support (0.678) is positive and significant ($p = 0.013$), while the coefficient for growth mindset (-0.059) is negative but not significant ($p = 0.831$), indicating that growth mindset does not significantly affect the likelihood of high academic burnout. Overall, the analysis shows that social support plays a more dominant role than growth mindset in reducing the risk of academic burnout, and while the development of growth mindset has a smaller contribution, both factors are important for supporting students' mental health.

Table.7 The Social Support and Growth Mindset Contribute to the Probability of Academic Burnout in Students at SMA Negeri 11 Medan

Variable		Koefisien (B)	p value	Exp (B)	95 persen C.I for exp (B)	
					Lower	Upper
<i>Academic Burnout</i>						
Low	Intercept	-0.916	0,322			
	Social Support	0,656	0,042	1,927	1,025	3,623
	Growth Mindset	0,047	0,886	1,048	0,551	1,994
Moderate	Intercept	0,551	0,476			
	Social Support	0,678	0,013	1,970	1,153	3,367
	Growth Mindset	-0,059	0,831	0,942	0,547	1,624

Based on data analysis, there is an influence of social support levels on academic burnout categories among students of SMA Negeri 11 Medan. Social support received by students from family, friends, and teachers plays a significant role in determining their perceived academic exhaustion. At SMA Negeri 11 Medan, the dominant category of academic burnout is "Moderate," with 69% of students falling into this category. For example, one respondent might feel stressed due to the pressure of completing multiple tasks and exams at the same time. Although they manage to complete their assignments, they feel exhausted and demotivated, yet continue their academic activities. Another respondent experiences pressure from the need to maintain high performance, even though they manage to attend lessons and exams well. However, the time spent studying leaves them little opportunity to rest or engage in refreshing activities. Despite not reaching severe burnout, feelings of exhaustion and stress persist, affecting their overall well-being.

The dominant social support in the "Moderate" category at SMA Negeri 11 Medan is influenced by factors such as the limitations of the available counseling system. Although there are efforts to provide support, such as roles played by teachers and counselors, these are insufficient or not intense enough to reach all students equally. Moreover, social dynamics at school, such as a lack of open interaction or communication between students and teachers, may cause some students to feel they are not receiving the support they need. While many students feel the support is adequate, it lacks depth or specificity to help them overcome academic or personal challenges. Other factors include students who are more independent and reluctant to seek support, while those who need more help may hesitate or be unaware of where to turn for assistance.

At SMA Negeri 11 Medan, most students fall into the "Moderate" category regarding growth mindset. For instance, one respondent believes that hard work can improve their exam or assignment grades. However, when facing difficulties in understanding challenging material, they feel frustrated and begin to doubt their abilities. Although they put in effort, they have not fully embraced the idea that failure or difficulty is part of the learning process and can be an opportunity for growth. Another respondent, who received low exam scores, believes they are not smart enough, rather than seeing it as an opportunity to improve their study methods. Although they recognize the importance of effort, their application of growth mindset has not fully developed, and they tend to give up easily when faced with difficulties.

Research by Kim (2018) found that social support, especially from schools or teachers, has a significant negative correlation with academic burnout. This support, particularly in reducing inefficacy, plays a crucial role in helping students feel more capable of coping with academic pressure. Liu (2022) added that resilience acts as a mediator in the relationship between social support and academic burnout. Liu's findings are relevant to this study as they both address the link between social support and academic burnout. Liu showed that high social support can enhance students' resilience, which then protects them from academic burnout. This study can be enriched by incorporating resilience as a

factor explaining why some students with high social support still experience academic burnout.

Zhang (2020) highlighted that social support, particularly subjective support and its effectiveness, can reduce the risk of learning burnout among medical students. This is relevant to this study as both discuss the role of social support in reducing burnout. Zhang emphasized the importance of effective subjective support in mitigating learning burnout, which also plays a role in reducing academic burnout in students. Gungor (2019) found that hope acts as a mediator between high social support and reduced school burnout in high school students. Gungor's research provides an additional dimension, emphasizing that psychological factors like hope strengthen the positive impact of social support on students' academic well-being.

Kilic (2021) emphasized that perceived stress is a major predictor of academic burnout, with social support serving as a significant protective factor. This is relevant to this study, as both examine factors influencing academic burnout, highlighting that perceived stress is a key predictor, and social support can significantly mitigate burnout. Both studies underline the importance of social support in reducing burnout caused by stress.

In conclusion, various studies indicate that social support consistently plays a role in reducing academic burnout across different educational contexts. Raising awareness and implementing effective social support in schools can be a crucial strategy to improve students' mental and academic well-being. Based on data analysis, there is also an influence of growth mindset levels on academic burnout categories at SMA Negeri 11 Medan. Growth mindset, the belief that abilities can develop through effort and learning, affects how students cope with academic pressure and challenges. In the context of SMA Negeri 11 Medan, students with a positive view of their abilities tend to be more optimistic about facing academic challenges. They believe learning outcomes can improve through hard work and proper strategies. In contrast, students who feel underachieving tend to be more pessimistic. They often fall into a fixed mindset, believing their abilities are fixed and unchangeable, making them more likely to feel overwhelmed or give up when facing academic pressure.

Several studies provide relevant perspectives, particularly related to academic burnout, growth mindset, and influencing factors. Kim (2020) found that academic grit and growth mindset can reduce or prevent academic burnout among high school students preparing for exams. This aligns with Liu (2022), who emphasized that mental resilience plays a role as a mediator between growth mindset and academic burnout. Liu's research enriches this study by explaining that, in addition to growth mindset, resilience is also crucial in reducing academic burnout.

Although growth mindset can protect students from burnout, Nieuwenhuis (2023) explained that its effects may not always involve specific physiological mechanisms like vagal activity. This suggests that while growth mindset has a strong influence, its effects on burnout might be more psychological and not always measurable physiologically. Zhao (2023) showed that growth mindset interventions in elementary schools can strengthen students' beliefs in their abilities, with parental support reinforcing this effect. This highlights that external factors like social support and environment can enhance the positive effects of growth mindset, relevant for understanding how to reduce burnout among students.

Research by Roth (2019) in higher education showed that growth mindset helps medical students manage stress and improve academic success. This indicates that growth mindset is applicable not only to high school students but also at higher education levels. However, Brougham (2017) revealed that growth mindset interventions do not always improve academic grades, suggesting that its impact on academic achievement may vary depending on the context. This underscores the importance of a specific, contextual approach to applying growth mindset.

Macnamara (2022) added that the effects of growth mindset interventions on academic achievement may not be significant due to inadequate study design. Nonetheless, Parada (2021) showed that among university students, growth mindset can improve well-being and academic achievement, reinforcing the idea that growth mindset can improve academic well-being and reduce burnout. Burnette (2020) highlighted that in entrepreneurship, growth mindset can enhance students' resilience in facing tasks, even though it does not directly impact class performance. These findings, while focusing on different contexts, show that growth mindset has the potential to reduce burnout and improve academic well-being, directly relevant to this study in analyzing factors influencing academic burnout.

Overall, this study emphasizes the importance of understanding the role of growth mindset in education to reduce the risk of academic burnout and improve students' well-being. Integrating this concept into educational strategies at SMA Negeri 11 Medan can provide a strong foundation for creating a positive learning environment that supports holistic student development.

CONCLUSIONS AND RECOMMENDATIONS

Social support significantly influences academic burnout among students at SMA Negeri 11 Medan. Higher levels of social support increase the likelihood of students avoiding academic burnout with a high degree of certainty. Similarly, growth mindset also impacts academic burnout, with improved growth mindset scores increasing the chances of students not experiencing academic burnout, consistently supporting this finding. Together, both social support and growth mindset play crucial roles in reducing the risk of academic burnout among students at SMA Negeri 11 Medan.

ADVANCED RESEARCH

Still conducting further research to find out more about The Influence of Social Support and Growth Mindset on Academic Burnout in High School Students at SMA Negeri 11 Medan.

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