

The Relationship Between Academic Anxiety and Learning Motivation of Fourth Grade Students at SDN Madyopuro 3 Prior to the Final Semester Assessment

Yuris Indria Persada¹, Nisa Aulia²

¹State University of Malang

²Department KSDP of, State University of Malang, Malang City, Indonesia

*Corresponding author, email: yurispersada.fip@um.ac.id, nisa.aulia.2301516@students.um.ac.id

Keywords

Academic Anxiety
Learning Motivation
Elementary School
Final Semester Assessment
Quantitative Study

Abstract

This study aims to examine the relationship between academic anxiety and learning motivation among fourth-grade students at SDN Madyopuro 3 prior to the Final Semester Assessment. A quantitative descriptive approach was applied, involving 25 students as the total sample. Data were collected through a Self-Comparison Scale (SCS) questionnaire consisting of 20 statement items using a Likert scale. The validity and reliability of the instrument were confirmed through expert judgment, with ethical clearance granted by the school. Data analysis included descriptive statistics, Pearson correlation validity tests, Cronbach's Alpha reliability tests, and Spearman correlation for hypothesis testing. The results showed that 76% of students experienced moderate academic anxiety, while 80% of students had medium to high learning motivation. The Spearman correlation test indicated a negative and significant relationship between academic anxiety and learning motivation ($\rho = -0.417$, $p < 0.05$). These findings suggest that the higher the students' academic anxiety, the lower their learning motivation tends to be, and vice versa. The study recommends implementing supportive and student-centered learning strategies to reduce anxiety and enhance motivation prior to assessments.

1. Introduction

Education is a continuous and interconnected process in which each stage contributes to longterm goals and individual development. In this context, elementary education plays a crucial role as it lays the foundational aspects of character formation, cognitive development, and academic readiness. To ensure the effectiveness of the learning process, a systematic evaluation mechanism is essential, one of which is learning assessment. The final semester assessment (*Penilaian Akhir Semester* or PAS) is a form of summative evaluation implemented at the elementary school level, to measure students' achievement of the material taught throughout the semester. Beyond functioning as a measure of academic success, PAS also reflects the effectiveness of instructional delivery. However, its implementation often causes psychological stress among students, which may manifest as academic anxiety.

Academic anxiety refers to emotional responses characterized by fear, nervousness, and lack of self-confidence in academic situations, such as examinations or completing school assignments (Aristawati et al., 2020; Purnama et al., 2023). This form of anxiety can involve physiological symptoms (e.g., sweating, rapid heartbeat), psychological disturbances (e.g., fear, restlessness), and cognitive disruptions (e.g., difficulty concentrating, mental blankness). Previous research indicates that fear of failure and performance pressure are among the primary causes of academic anxiety (Fatmawati et al., 2023; Irsanin, 2023). Conversely, successful learning outcomes are strongly influenced by learning motivation, which encompasses both internal and external drives that stimulate a student's engagement in academic activities (Hendra, 2015). Motivation can be intrinsic arising from a student's desire to succeed and personal interest (extrinsic) derived from external encouragement, such as parental expectations or academic rewards. A lack of motivation is often associated with decreased academic achievement, while higher motivation tends to foster persistence and resilience, especially when facing academic evaluations.

Previous studies by Fariza (2020) and Florencia et al. (2023) have demonstrated that high academic anxiety negatively correlates with academic performance and that students with lower motivation are more likely to experience heightened anxiety. While various studies have examined

anxiety and motivation independently, research specifically focusing on the relationship between academic anxiety and learning motivation among elementary students prior to final assessments, particularly in fourth-grade students, remains limited. Based on this background, the present study aims to identify the levels of academic anxiety and learning motivation among fourth-grade students at SDN Madyopuro 3 prior to the Final Semester Assessment. Analyze the correlation between academic anxiety and learning motivation among these students in the context of PAS. This research is expected to contribute to a deeper understanding of students' psychological responses in anticipation of academic assessments and to provide practical recommendations for teachers, schools, and parents in designing appropriate strategies to reduce anxiety and enhance student motivation.

2. Method

This study employed a quantitative approach with a descriptive correlational method. This approach was chosen to describe the levels of academic anxiety and learning motivation among students and to examine the correlation between the two variables. The research was conducted in November 2024 at SDN Madyopuro 3, Malang, Indonesia. The population in this study consisted of all fourth-grade students at SDN Madyopuro 3 during the 2024/2025 academic year, totaling 25 students. A total sampling technique was applied, whereby the entire population was used as the research sample. The selection of fourth-grade students was intentional, as this level represents the early phase of upper primary school, in which students are beginning to face academic assessments more seriously-particularly the Final Semester Assessment (*Penilaian Akhir Semester*, PAS) scheduled for December 2, 2024.

The data collection instrument used in this study was a Likert-scale questionnaire based on the Self-Comparison Scale (SCS), which was constructed using theoretical indicators for each variable. The instrument consisted of 20 positively-worded items, each with four response options: Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). Prior to distribution, the instrument underwent expert judgment validation by university lecturers specializing in educational psychology and learning evaluation. This process ensured the content relevance and clarity of the questionnaire items. In addition, this research was conducted with the approval of the school authorities and supported by an ethical clearance letter issued by the researcher's university to ensure adherence to research ethics, including participant rights and data confidentiality. The indicators for the questionnaire are presented in the following table:

Table 1. Indicators of Academic Anxiety and Learning Motivation Instruments

Variable	Aspect	Indicator
Academic Anxiety	Physiological	Cold sweating, dizziness, abdominal discomfort, rapid heartbeat
	Psychological	Nervousness, lack of confidence, tension, sleep disturbances
	Cognitive	Difficulty concentrating, blank mind, excessive fear
Learning Motivation	Intrinsic	Desire to succeed, enthusiasm and interest in learning
	Extrinsic	External encouragement, reward in learning

Instrument validity was tested using Pearson's Product-Moment Correlation, with items considered valid if the correlation coefficient (r) exceeded the critical value (r table, $N = 25$, $\alpha = 0.05$) and the significance level (Sig.) was less than 0.05. The reliability test used Cronbach's Alpha, with a threshold of $\alpha > 0.60$ considered acceptable for internal consistency. All statistical tests were processed using IBM SPSS version 26 and Microsoft Excel. Descriptive statistical analysis was applied to determine the distribution of academic anxiety and learning motivation scores. The categorization thresholds were calculated using mean and standard deviation, with the following cutoffs.

Academic Anxiety Low: $X < 25.38$. Moderate: $25.38 \leq X \leq 44.38$. High: $X > 44.38$. Learning Motivation Low: $X < 14.31$. Moderate: $14.31 \leq X \leq 18.98$. High: $X > 18.98$. To test the hypothesis regarding the correlation between the two variables, the Spearman Rank-Order Correlation test was used, as the data did not meet the assumptions of parametric analysis. The significance level was set at $p < 0.05$. Prior to this, the Kolmogorov-Smirnov normality test was conducted to verify the distribution of the residual data.

3. Results and Discussion

The validity test was conducted using Pearson Product-Moment correlation. With a sample size of 25 students, the critical r table value at the 5% significance level was 0.374. All questionnaire items showed r count > 0.374 and significance < 0.05 , indicating that every item was valid and acceptable for use in the study. Reliability was assessed using Cronbach's Alpha. The resulting coefficient was 0.804, which exceeds the threshold of 0.60, indicating that the instrument was reliable and internally consistent. This section aims to describe the general data characteristics, including the minimum, maximum, mean, and standard deviation for each variable.

Table 2. Descriptive Statistics of Academic Anxiety and Learning Motivation

Variable	Minimum	Maximum	Mean	Std. Deviation
Academic Anxiety	18	56	34.88	9.523
Learning Motivation	12	20	16.84	2.495

Classification criteria were based on norm-referenced interpretation using the mean and standard deviation, as follows Academic Anxiety Low: $X < 25.38$. Moderate: $25.38 \leq X \leq 44.38$. High: $X > 44.38$. Learning Motivation Low: $X < 14.31$. Moderate: $14.31 \leq X \leq 18.98$. High: $X > 18.98$.

Table 3. Frequency Distribution of Academic Anxiety

Category	Frequency	Percentage
Low Anxiety	2	8.0%
Moderate Anxiety	19	76.0%
High Anxiety	4	16.0%

The data indicate that the majority of students (76%) experience moderate levels of academic anxiety before the final semester assessment.

Table 4. Frequency Distribution of Learning Motivation

Category	Frequency	Percentage
Low Motivation	5	20.0%
Moderate Motivation	11	44.0%
High Motivation	9	36.0%

Most students (80%) were found to have moderate to high levels of motivation prior to the exam period. As seen below, the visual comparison of both variables strengthens the statistical summary.

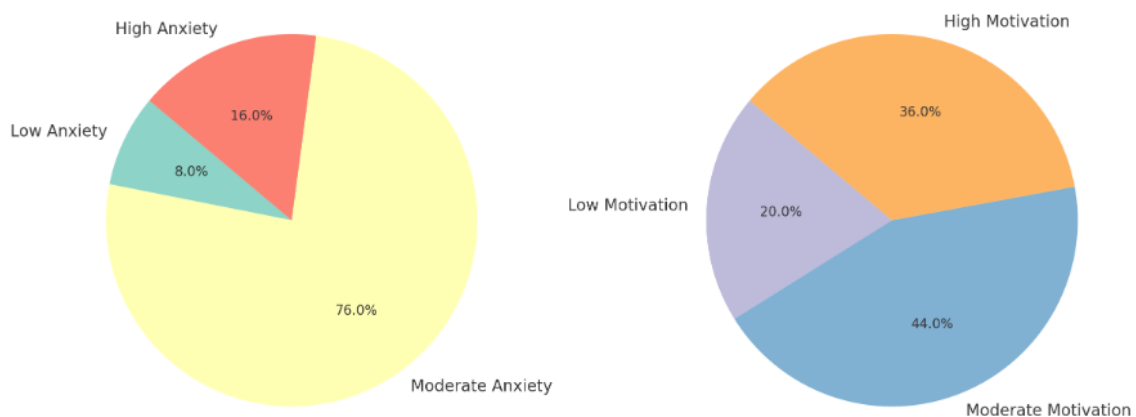


Figure 1. Distribution of Academic Anxiety & Learning Motivation

Normality Test The Kolmogorov–Smirnov test was used to assess the normality of residuals. The result indicated a value of Asymp. Sig. (2-tailed) = 0.200, which is greater than 0.05, confirming that the data distribution was normal. Hypothesis Testing – Spearman Correlation to evaluate the relationship between academic anxiety and learning motivation, the Spearman Rank-Order Correlation test was employed due to non-parametric data characteristics.

Table 5. Spearman Correlation Test Result

Variable 1	Variable 2	Spearman's ρ	Sig. (2-tailed)
Academic Anxiety	Learning Motivation	-0.417	0.038

The results indicate a statistically significant negative correlation between academic anxiety and learning motivation ($\rho = -0.417$; $p < 0.05$). This implies that as academic anxiety increases, student motivation decreases, and vice versa. According to the interpretation scale of correlation strength, the coefficient of -0.417 falls within the moderate range (0.26–0.50). Therefore, it can be concluded that the relationship between the two variables is moderately strong and inverse.

3.1. Results and Discussion 2

The findings of this study reveal that among the 25 fourth-grade students at SDN Madyopuro 3, a majority (76%) experienced moderate levels of academic anxiety, while 16% experienced high anxiety and 8% showed low anxiety. These results indicate that academic anxiety is relatively prevalent among students prior to the Final Semester Assessment. This level of anxiety may stem from several manifestations such as nervousness, sweating, fear of failure, reduced confidence, inability to focus, and physiological responses like a racing heartbeat or digestive disturbances, as described by Amirullah and Yunus (2016), Mukholil (2018), and Kodirun (2019). Such symptoms are aligned with three core dimensions of anxiety: physiological (e.g., sweating, dizziness), psychological (e.g., nervousness, sleep disturbances), and cognitive (e.g., inability to concentrate, irrational fears). In addition, Fazila et al. (2023) and Nadila & Fajariyah (2023) point to biological causes, including hormonal responses and neurological triggers, that can heighten anxiety levels. Psychologically, factors such as low self-esteem, fear of rejection, and prior academic experiences can contribute to anxiety (Syafira, 2022). Social factors including parental pressure, peer comparison, and fear of judgment further intensify students' emotional responses during evaluations (Istiantoro, 2018).

These findings highlight the multifaceted nature of academic anxiety, which is influenced by internal (e.g., self-perception, preparedness) and external (e.g., family expectations, classroom competitiveness) variables. Students experiencing high anxiety levels often struggle with short-term memory retrieval and information processing, which can hinder academic performance (Wardani, 2021; Irsanin, 2023). Given these challenges, educators play a critical role in creating a supportive learning environment. Teachers should build students' confidence, employ varied instructional strategies, and develop engaging classroom atmospheres to mitigate anxiety. Such interventions can positively influence students' academic outcomes (Wardani et al., 2024). In terms of learning motivation, the study found that 44% of students exhibited moderate motivation, 36% high motivation, and only 20% low motivation. These results suggest that the majority of students possess a positive disposition toward learning. Motivation indicators include intrinsic aspects (e.g., desire to succeed, interest in learning) and extrinsic aspects (e.g., encouragement from others, rewards), as supported by Hendra (2015).

Motivation is essential in guiding students' learning behavior and sustaining their engagement. Teachers and parents must identify and nurture individual motivational differences. According to Yudharsyah et al. (2021), educators can enhance motivation by: (1) fostering students' desire to learn, (2) linking learning to real-life outcomes, (3) offering praise and reinforcement, (4) structuring effective study routines, (5) supporting students with learning challenges, and (6) using diverse teaching methods to maintain engagement. The hypothesis testing using Spearman's correlation indicates a statistically significant negative relationship between academic anxiety and learning motivation ($\rho = -0.417$; $p = 0.038$). This result supports the interpretation that increased academic anxiety tends to correspond with decreased learning motivation. The correlation coefficient suggests a moderate strength of association (0.26–0.50), affirming that the relationship is meaningful though not absolute.

This inverse relationship implies that anxiety not only affects students' emotional well-being but also their motivation to engage with academic tasks. Visual patterns observed in the distribution charts further emphasize this inverse trend: students with high anxiety levels tend to show lower levels of motivation, and vice versa. These findings reinforce the importance of early identification

and intervention for academic anxiety in elementary school settings. By reducing anxiety through proactive pedagogical and psychological strategies, educators can simultaneously foster higher learning motivation and improve academic achievement.

3.2. Conclusion

Based on the findings of this study, it can be concluded that the academic anxiety level among fourth-grade students at SDN Madyopuro 3 is predominantly at a moderate level, with 76% (19 out of 25 students) experiencing moderate anxiety. Several contributing factors include students' self-perception when facing difficult assessments, low self-confidence, and a lack of preparation prior to examinations. These factors are reflected in common anxiety indicators captured through the questionnaire, such as cold sweating, nervousness, restlessness, fear, tension, and difficulty concentrating.

Furthermore, the learning motivation of the students is generally within the medium to high range. A total of 9 students (36%) exhibited high motivation, while 11 students (44%) showed moderate motivation. These findings suggest that most students possess a satisfactory level of academic motivation prior to the Final Semester Assessment. The correlation analysis using Spearman's test revealed a statistically significant negative relationship between academic anxiety and learning motivation ($\rho = -0.417$, $p = 0.038$). This suggests that higher levels of academic anxiety are associated with lower levels of learning motivation and vice versa.

Recommendations for students are encouraged to view academic anxiety as a motivational trigger rather than an obstacle. Feelings of fear or worry before examinations can be redirected into productive learning efforts and used as a driving force to achieve better academic outcomes. For Teachers and Schools Educators should implement strategies to strengthen students' motivation, such as adopting student-centered learning approaches and utilizing contextual teaching methods that connect academic content to real-life experiences. Doing so may foster greater curiosity and enthusiasm for learning, ultimately reducing anxiety and enhancing academic confidence. For Future Researchers this study is limited to fourth-grade students; future research should consider broader samples, including students from lower and upper grades or across different schools, to obtain more comprehensive data. Additionally, subsequent studies are encouraged to explore innovative pedagogical interventions that can effectively reduce academic anxiety and enhance motivation, particularly within the context of digital-era learning.

Author Contributions

To promote transparency, we encourage authors to provide an author statement file detailing their specific contributions to the paper using the relevant CRediT roles: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing. Authorship statements should list authors' names first, followed by their respective CRediT role(s). For example: Nur Hudha: Conceptualization, Methodology, Software. John Smith: Data curation, Writing - Original draft preparation. Jane White: Visualization, Investigation. Bruce Buck: Supervision. Matt Jr.: Software, Validation. Peter Long: Writing - Reviewing and Editing.

All authors have equal contributions to the paper. All the authors have read and approved the final manuscript.

Funding

You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement, it is recommended to state this.

No funding support was received.

Declaration of Conflicting Interests

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential competing interests include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in two places: 1. A summary declaration of interest statement in the title page file (if double anonymized) or the manuscript file (if single anonymized). If there are no interests to declare then please state this: 'Declarations of interest: none'. 2. Detailed disclosures as part of a separate Declaration of Interest form, which forms part of the journal's official records. It is important for potential interests to be declared in both places and that the information matches.

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Acknowledgement (Optional)

Recognize those who helped in the research, especially funding supporter of your research. Include individuals who have assisted you in your study: Advisors, Financial supporters, or may another supporter, i.e. Proofreaders, Typists, and Suppliers, who may have given materials. Do not acknowledge one of the authors names.

References

- Amirullah, R., & Yunus, M. (2016). Upaya Guru dalam Mengatasi Kecemasan Siswa dalam Menghadapi Tes (Pencapaian Hasil Belajar) Siswa di SMP Negeri 3 Banda Aceh. *Jurnal Ilmiah P*, 1(1), 96–109.
- Aristawati, A. R., Psikologi, F., Pratitis, N., Psikologi, F., Ananta, A., & Psikologi, F. (2020). Kecemasan Akademik Mahasiswa Menjelang Ujian Ditinjau dari Jenis Kelamin. *Sukma: Jurnal Penelitian Psikologi*, 1(01), 73–80.
- Fariza, N. M. (2020). Pengaruh Kecemasan Mengikuti Ujian Akhir Semester Terhadap Prestasi Belajar Matematika Siswa Kelas V SDN 4 Sukananti Kecamatan Kedurang Ulu Kabupaten Bengkulu Selatan. Skripsi. Institut Agama Islam Negeri Bengkulu.
- Fatmawati, D. F., Nuryani, R., & Lindasari, S. W. (2023). Kecemasan Siswa Sekolah Dasar Menghadapi Assesment Nasional Berbasis Komputer. *Jurnal Keperawatan*, 15(3), 1391–1398.
- Fazila, F., Dela, S., Susmita, H., Pegi, R., & Zakiyya, Y. A. (2023). Tingkat Kecemasan Akademik pada Siswa Ditinjau dari Perbedaan Gender. *Educate : Journal Of Education and Learning*, 1(2), 49–57.
- Florenca, D., Septiadi, F., & Saleh, M. (2023). Pembelajaran PJO K Daring: Tingkat Motivasi dan Kecemasan Siswa SDIT Attakwin Pasca Pandemi Covid-19. *Jurnal Educatio*, 9(4), 2149–2153.
- Hendra. (2015). Identifikasi Motivasi Belajar Dan Faktor-Faktor yang Berkontribusi Terhadap Keseriusan Belajar Siswa Smp Muhammadiyah Kota Bima. *Jurnal Pendidikan Matematika Dan Ilmu Pengetahuan Alam (MIPA)*, 3(2), 35–50.
- Irsanin, A. S. (2023). Gambaran Kecemasan Siswa Kelas VI SD Negeri Tunggulsari 1 dalam Menghadapi Ujian Sekolah. *Jurnal Talenta Psikologi*, 12(2), 1–14.
- Istiantoro, D. (2018). Identifikasi Faktor Penyebab Kecemasan Akademik pada Siswa Kelas XI di SMA Negeri 3 Bantul. *Jurnal Riset Mahasiswa Bimbingan Dan Konseling*, 4(10), 626–636.
- Kodirun, A. (2019). Pengaruh Kecemasan Belajar Terhadap Hasil Belajar Matematika Siswa Kelas X SMA Negeri 1 Gu. *Jurnal Pendidikan Matematika*, 8(1), 25–36.
- Mukholil. (2018). Kecemasan dalam Proses Belajar. *Jurnal Eksponen*, 8(1), 3–4.
- Nadila, S. S., & Fajariyah, N. (2023). Faktor-Faktor Yang Berhubungan dengan Tingkat Kecemasan dalam menghadapi Menarche pada Siswi di SDI Teladan Al-Hidayah 1 Jakarta. *Maheza: Malahayati Health Student Journal*, 3(2), 380–399.
- Purnama, Z. R., Laely, N., Hamidah, I. S., Ina, K., & Tukan, T. (2023). Hubungan Tingkat Kecemasan Belajar Dan Kemampuan Literasi Sains Dengan Hasil Belajar IPA Mahasiswa PGSD UNSAR. 2(2), 375–382.
- Supriyanto. (2021). Hubungan Promosi Melalui Media Sosial dan Word of Mouth Marketing dengan Keputusan Konsumen dalam Memilih USB Aukey di Kota Palembang. *Jurnal Ilmiah Manajemen*, 10(03), 145–156.
- Syafira, A. (2022). Hubungan Antara Kecemasan Menghadapi Tes dengan Hasil Belajar Biologi Siswa di SMAN Kota Depok. Skripsi. Universitas Islam Negeri Syarif Hidayatullah.
- Wardani, I., Syaaidiman, & Suarlin. (2024). Pengaruh Tingkat kecemasan siswa terhadap hasil belajar matematika kelas V SD Inpres Japing kecamatan Pattalassang Kabupaten Gowa. *Pinisi Journal of Science & Technology*, 1(1), 1–9.
- Wardani, N. (2021). The Effect of Mathematics Anxiety on Students ' Learning Outcomes in Class X High School. *Nucleus: Research and Development for Better Future*, 3(2), 155–161.
- Yudharsyah, J., Kresnadi, H., & Suparjan. (2021). Analisis Motivasi Belajar dan Faktor-faktor Yang Mempengaruhinya pada Siswa Kelas V Masa Covid-19. *Jurnal Pendidikan Dan Pembelajaran*, 10(6), 1–8.