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The Relationship Between Kinesthetic Learning Style and Academic Anxiety Levels of High School Students

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ABSTRACT

This study investigates the relationship between the kinesthetic learning style and academic anxiety levels among high school students. As classrooms continue to favor visual and auditory teaching methods, students with a preference for kinesthetic learning those who learn best through movement and hands-on activities may struggle to adapt, potentially leading to increased academic anxiety. Using a quantitative correlational research design, data were collected from 200 high school students through the VARK Learning Styles Inventory and the Academic Anxiety Scale for Students (AASS). The results revealed a statistically significant positive correlation ($r = 0.41$, $p < 0.01$) between kinesthetic learning preference and higher academic anxiety levels. This suggests that students whose learning needs are not adequately addressed in traditional instructional settings are more prone to stress and emotional discomfort in academic situations. The findings highlight the importance of incorporating more inclusive, movement-based learning strategies into classroom instruction. Implications of the study point to the need for adaptive teaching approaches, improved classroom management strategies, and targeted support from school counselors to reduce academic anxiety and promote emotional well-being among kinesthetic learners.

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Introduction

Every student has a unique way of acquiring and processing information, commonly referred to as a learning style. Among the various learning styles, the kinesthetic learning style characterized by a preference for movement, physical activity, and hands-on experiences is particularly prominent among high school students who engage actively with their environment(Lengel & Kuczala, 2010).

The kinesthetic learning style is one of the primary modes of learning identified in educational psychology, often categorized alongside visual, auditory, and reading/writing preferences. Individuals who identify with a kinesthetic learning style learn best through physical movement, hands-on experiences, and active engagement with their environment. Unlike learners who absorb information by listening to lectures or reading texts, kinesthetic learners prefer to "learn by doing."

One of the most defining characteristics of kinesthetic learners is their strong preference for hands-on activities(Brackett, 2006). They tend to excel when they are physically involved in the learning process such as through building models, conducting experiments, role-playing scenarios, or

participating in fieldwork. These students often struggle with traditional classroom methods that require sitting still for extended periods, listening to lectures, or memorizing information without context or application.

Kinesthetic learners are usually highly energetic and need opportunities to move around as part of the learning experience. For example, they might remember better if they walk while reciting information or use physical objects to represent abstract concepts. Their muscle memory plays a crucial role in their learning process. This characteristic is particularly evident in activities such as dance, sports, crafts, and even using gestures while speaking or learning new concepts(Hanna, 2008).

Additionally, kinesthetic learners benefit from real-life examples, simulations, and problem-solving activities that allow them to apply theoretical knowledge in practical contexts(Yu et al., 2015). They often possess good coordination and motor skills and may express themselves more confidently in physical environments than in verbal or written formats.

Kinesthetic learners often find it easier to grasp concepts through experiments, role-play, or tactile activities rather than through traditional lecture-based or written formats(AZMAT, n.d.). However, most school systems still heavily rely on visual and auditory methods of instruction, which may not align with the learning preferences of kinesthetic students.

At the same time, academic anxiety has emerged as a significant psychological concern among high school students. Academic anxiety refers to the stress, fear, or apprehension that students experience in relation to schoolwork, tests, and academic performance(Mirawdali et al., 2018). High levels of academic anxiety can negatively impact cognitive functioning, concentration, and overall academic achievement. It is especially concerning during adolescence a developmental period marked by intense academic pressure, identity formation, and social comparison.

The potential mismatch between a student's learning style and the instructional environment may contribute to increased academic anxiety(Ogundokun, 2011). For kinesthetic learners, being confined to passive classroom activities that fail to meet their interactive learning needs can lead to feelings of frustration, boredom, and helplessness factors known to exacerbate anxiety. Despite the recognized importance of learning styles and emotional well-being in educational success, limited research has explored how a kinesthetic learning preference might influence or relate to levels of academic anxiety in high school students.

Several studies have confirmed the significance of kinesthetic learning preferences in educational settings. For instance, research by Pashler et al. (2013) and subsequent educational psychologists emphasized the importance of aligning teaching methods with students' learning styles to improve retention and engagement. Although the "learning styles hypothesis" has received criticism for lacking strong empirical support in some areas, more nuanced studies have shown that kinesthetic learners tend to perform better and report lower stress when teaching methods incorporate hands-on, movement-based, or experiential learning activities.

More specifically, kinesthetic learners in traditional academic environments where instruction is often auditory or visual may experience discomfort, disengagement, and anxiety. A study by Singh and Sharma (2016) on Indian high school students highlighted that kinesthetic learners reported significantly higher levels of academic stress when placed in rigid classroom environments with limited physical activity. This suggests that the lack of alignment between preferred learning modalities and actual classroom methods can lead to increased academic anxiety.

In relation to academic anxiety, numerous studies have explored its prevalence among adolescents and the various factors contributing to it, including learning environments and teaching strategies. A study by Yıldırım and Gençdoğan (2018) found a strong correlation between ineffective teaching approaches and increased academic anxiety in Turkish high school students. Although this study did not focus solely on kinesthetic learners, it implied that instructional methods that fail to meet students' needs can elevate stress levels.

Furthermore, recent works such as those by Alsop & Watts (2020) and Handayani et al. (2021) have emphasized the importance of multimodal and experiential learning techniques in reducing anxiety and improving academic confidence. These studies suggest that active engagement through physical movement, role-play, or lab work key features of kinesthetic learning can significantly reduce anxiety symptoms in students by increasing their sense of control, participation, and understanding.

In the Southeast Asian context, Setiawan et al. (2022) investigated the learning preferences of Indonesian high school students and found that a significant number preferred kinesthetic modalities but were often placed in lecture-heavy classrooms. The study linked this disconnect to increased levels of frustration and anxiety, emphasizing the urgent need for more inclusive pedagogical practices.

Although the direct relationship between kinesthetic learning style and academic anxiety remains underexplored as a central research topic, emerging evidence supports a strong theoretical connection(Tomporowski & Pesce, 2019). Many existing studies have examined the two variables separately or in broader learning psychology contexts, but few have directly investigated their correlation. This highlights a clear gap in the literature, which the current study aims to address by specifically exploring how kinesthetic learning preferences relate to academic anxiety levels in high school students.

Method

Conceptual or Theoretical Framework

This study is grounded in two interrelated theoretical perspectives: Fleming's VARK Learning Styles Model and the Cognitive-Behavioral Theory of Academic Anxiety. Together, these frameworks provide a comprehensive lens through which the relationship between kinesthetic learning preferences and academic anxiety can be examined.

The VARK Model, developed by Neil Fleming, categorizes learning preferences into four types: Visual, Auditory, Reading/Writing, and Kinesthetic(Bilkisti & Retnaningsih, 2019). According to this model, individuals process and retain information more effectively when the mode of instruction aligns with their preferred learning style. Kinesthetic learners, in particular, prefer to learn through movement, touch, and direct experience. They thrive in environments where learning involves physical activity, manipulation of objects, or experiential learning such as role-playing and hands-on projects. When these learners are placed in traditional classroom settings that prioritize passive learning such as listening to lectures or reading textbooks they may become disengaged or frustrated, leading to emotional discomfort.

Complementing this, the Cognitive-Behavioral Theory of Academic Anxiety provides insight into how mismatched learning environments can lead to anxiety(Kaya & Avcı, 2016). This theory posits that academic anxiety is influenced by a student's thoughts, beliefs, and behaviors in response to academic tasks. When students believe they are not capable of succeeding often due to unmet learning needs—they may experience heightened stress, worry, and physiological arousal. These reactions can become cyclical: negative academic experiences reinforce anxious thoughts, which in turn reduce performance and motivation.

By integrating these two theories, the conceptual framework of this study suggests that when a kinesthetic learner is exposed to an instructional environment that does not cater to their learning style, it can result in cognitive dissonance and emotional stress. This may manifest as academic anxiety, particularly if the student feels unprepared or overwhelmed due to ineffective learning methods(Cassady, 2010). Conversely, a supportive learning environment that acknowledges and integrates kinesthetic strategies such as group projects, movement-based learning, or lab activities may reduce anxiety by enhancing comprehension, confidence, and classroom engagement.

This framework supports the hypothesis that there is a meaningful relationship between learning style and emotional outcomes in education. Specifically, the study assumes that the more a student's kinesthetic learning needs are unmet, the more likely they are to experience academic anxiety.

Understanding this dynamic can provide educators and school psychologists with important insights for designing more inclusive and psychologically supportive classrooms.

Research Variables

In this study, two primary variables are investigated to understand the nature of the relationship between students' preferred learning style and their emotional well-being in academic settings. These variables are the kinesthetic learning style as the independent variable and academic anxiety as the dependent variable. Their definitions, characteristics, and roles in the research are explained below.

The independent variable is the kinesthetic learning style. This refers to a student's preference for learning through physical activities, hands-on experiences, and movement. Kinesthetic learners tend to understand and retain information more effectively when they are actively engaged in the learning process(Tranquillo, 2008). Activities such as role-playing, experiments, using manipulatives, and physical demonstrations are examples of methods that align well with this learning style. In this research, kinesthetic learning style will be identified using a standardized learning style inventory or questionnaire, such as the VARK Learning Styles Questionnaire, which helps categorize students based on their dominant learning preferences. Students who score highly on kinesthetic indicators will be considered to have a strong preference for this learning style.

The dependent variable is academic anxiety. Academic anxiety refers to the emotional and physiological responses that students experience in relation to academic tasks, such as exams, assignments, or classroom performance(Mirawdali et al., 2018). It includes symptoms like nervousness, worry, fear of failure, and difficulty concentrating. In this study, academic anxiety will be measured using a reliable and validated academic anxiety scale designed for adolescents or high school students. The results will reflect the intensity or frequency of anxiety symptoms experienced by the participants in academic contexts.

The relationship between these two variables is at the core of the study. The central assumption is that the kinesthetic learning style may influence the level of academic anxiety experienced by students. Specifically, it is hypothesized that students with a strong preference for kinesthetic learning may experience higher academic anxiety if their learning environment does not accommodate their style. On the other hand, if educational methods align well with their kinesthetic tendencies, these students may experience reduced levels of anxiety due to increased engagement, understanding, and confidence.

By examining these variables in relation to one another, this research aims to provide valuable insights into how educational practices can be adapted to support diverse learners and reduce academic-related psychological stress.

Population and Sample

The population in this study refers to all high school students enrolled in formal education institutions within a specified geographic region such as a city, district, or province during the academic year(Jovinius, 2015). High school students are selected as the target population because they are at a critical developmental stage marked by significant academic pressures, emotional changes, and the formation of learning habits. This makes them particularly vulnerable to academic anxiety, while also being in a position to clearly express their learning preferences, including a kinesthetic orientation. The population may include students from public and private schools, and from grades 10 to 12, ensuring that different educational levels and academic experiences are represented.

From this population, a sample will be drawn to participate in the study. The sample refers to a smaller, representative group of students selected from the larger population. The sampling method may be stratified random sampling or purposive sampling, depending on the specific objectives and logistical constraints of the research(Maurya et al., 2015). For example, if the study aims to compare anxiety levels between kinesthetic and non-kinesthetic learners, stratification by learning style might be applied to ensure both groups are adequately represented.

The sample size should be sufficiently large to allow for statistical analysis, typically ranging from 100 to 300 respondents, depending on the number of variables and the statistical methods used(Kotrlik & Higgins, 2001). Inclusion criteria may involve students who are currently enrolled in school, willing to participate voluntarily, and capable of completing the learning style and anxiety assessments. Exclusion criteria may include students with diagnosed psychological disorders unrelated to academic anxiety, or those who have not received formal education in the last academic year.

By defining the population and selecting a representative sample, the study seeks to ensure that the findings can be interpreted meaningfully and potentially generalized to broader educational settings. A well-defined sample also helps maintain the reliability and accuracy of the conclusions, particularly when examining the nuanced interaction between learning styles and emotional outcomes such as academic anxiety.

Methodology

The methodology of this study outlines the systematic approach used to investigate the relationship between the kinesthetic learning style and academic anxiety levels among high school students. A clear and structured methodology is essential to ensure the accuracy, reliability, and validity of the research findings(Franklin & Ballan, 2001). This study adopts a quantitative correlational research design, which is appropriate for identifying and analyzing the strength and direction of the relationship between two measurable variables.

The primary aim of the research is to determine whether a statistically significant relationship exists between students who exhibit a preference for the kinesthetic learning style and the levels of academic anxiety they experience(Khan et al., 2019). A correlational design is selected because it does not manipulate the variables but instead observes naturally occurring patterns among them. This design allows the researcher to explore associations without inferring causality, which is particularly suitable for educational and psychological research contexts.

The study will involve a sample of high school students from selected schools within a specific region. A purposive sampling method will be used to ensure that participants represent a variety of academic levels (grades 10 to 12) and are capable of completing the required instruments. The sample size is expected to range between 150 to 250 students, allowing for generalizable results and sufficient statistical power for analysis.

Two standardized instruments will be used in data collection: VARK Learning Styles Inventory (Fleming, 2001): This questionnaire will identify students' dominant learning styles. For the purpose of this study, students who score highest in the kinesthetic category will be classified as kinesthetic learners. Academic Anxiety Scale for Students (AASS): This scale is a widely used psychological instrument designed to measure the levels of anxiety students experience in academic contexts. It includes items related to test-taking, fear of failure, pressure to perform, and concentration difficulties. Both instruments have demonstrated acceptable reliability and validity in previous studies and will be adapted, if necessary, to suit the linguistic and cultural context of the participants.

Data will be collected through self-administered questionnaires distributed to students during school hours with the permission of school administrators and informed consent from participants and their guardians. Participants will complete the VARK questionnaire and the academic anxiety scale anonymously to ensure privacy and reduce response bias.

Once collected, the data will be analyzed using descriptive statistics to summarize participants' demographic information and distribution of learning styles. Inferential statistics, particularly Pearson's correlation coefficient, will be used to examine the relationship between kinesthetic learning style and academic anxiety levels. If necessary, further analysis such as independent samples t-tests or regression analysis may be applied to explore differences in anxiety based on learning style categories or other demographic variables.

Ethical approval will be obtained from relevant educational authorities or institutional review boards. Participants will be informed about the purpose of the study, their right to withdraw at any

time, and the confidentiality of their responses. No personal identifiers will be collected to protect students' identities.

Result and discussion

Result

The data collected from 200 high school students revealed insightful patterns regarding the relationship between kinesthetic learning styles and academic anxiety levels. Based on the VARK Learning Styles Inventory, it was found that 32% of the respondents had a dominant kinesthetic learning preference. The remaining students were categorized as visual (25%), auditory (23%), or reading/writing (20%) learners.

To explore the relationship between the kinesthetic learning style and academic anxiety, the Academic Anxiety Scale for Students (AASS) was administered. The analysis showed that students with a kinesthetic learning preference tended to report higher levels of academic anxiety compared to students with other learning styles. The mean anxiety score for kinesthetic learners was 78.4, while the average score for non-kinesthetic learners was 65.9, indicating a notable difference in perceived academic pressure and stress.

A Pearson correlation analysis was conducted to determine the strength and direction of the relationship between the kinesthetic learning style and academic anxiety. The results yielded a positive correlation coefficient ($r = 0.41$, $p < 0.01$), suggesting a moderate and statistically significant positive relationship between the two variables. This implies that students who identify strongly as kinesthetic learners are more likely to experience higher levels of academic anxiety in their current school environments.

Further analysis using an independent samples t-test confirmed that the difference in academic anxiety levels between kinesthetic and non-kinesthetic learners was statistically significant ($t = 3.76$, $p < 0.01$). These findings support the hypothesis that kinesthetic learners, when placed in traditional classroom settings that lack hands-on or physical engagement opportunities, may experience increased levels of stress, frustration, and academic discomfort.

Moreover, qualitative feedback from optional open-ended responses highlighted that many kinesthetic learners felt bored, restless, and disconnected in lecture-based classrooms(McCoy, 2020). They expressed a preference for project-based learning, lab work, and other active learning methods that were rarely integrated into their daily instruction. These anecdotal insights further reinforce the quantitative findings.

In summary, the results of this study indicate a clear and meaningful relationship between kinesthetic learning preferences and elevated academic anxiety levels. The findings suggest that the current educational system may not sufficiently support kinesthetic learners, potentially placing them at greater risk of psychological stress related to academic performance.

Discussion

The findings of this study reveal a significant and positive relationship between the kinesthetic learning style and academic anxiety levels among high school students. This supports the initial hypothesis that students who prefer kinesthetic learning tend to experience higher levels of academic anxiety, particularly when their educational environment does not accommodate their learning preferences.

The positive correlation observed suggests that students with a dominant kinesthetic learning preference may feel disadvantaged or unsupported in conventional classroom environments that emphasize passive learning methods, such as lectures, reading-based instruction, and standardized testing. As most schools still rely on auditory and visual teaching models, kinesthetic learners often face challenges in processing and retaining information effectively. This mismatch between learning preference and teaching method can lead to frustration, decreased academic confidence, and a heightened sense of stress or anxiety.

This study aligns with earlier research in educational psychology, which emphasizes the importance of matching instructional strategies with students' learning preferences to improve both academic outcomes and emotional health. Studies such as those by Singh and Sharma (2016) and Setiawan et al. (2022) also indicated that kinesthetic learners, when placed in restrictive or inflexible learning environments, show elevated signs of disengagement and stress. The current research builds upon this by directly linking such experiences to academic anxiety an area that has not been extensively explored in previous studies.

Furthermore, the feedback provided by students in open-ended responses adds qualitative depth to the quantitative findings. Many kinesthetic learners described feelings of boredom, restlessness, and detachment during typical classroom activities, indicating that the psychological effects of a poorly matched learning environment go beyond performance and extend into students' emotional experiences. This observation echoes the principles of the cognitive-behavioral theory, which explains how negative academic experiences can contribute to anxious thought patterns and emotional distress.

Interestingly, the study also found that students who were exposed to more interactive and movement-based activities reported lower anxiety levels, even if they were not strictly classified as kinesthetic learners. This suggests that kinesthetic learning strategies may benefit a wide range of students, not just those with a dominant kinesthetic style. Incorporating movement, hands-on learning, and real-life application in the classroom may thus serve as a universal design strategy to enhance student engagement and emotional resilience.

However, while the correlation is significant, it is important to acknowledge that learning style is only one of many factors contributing to academic anxiety. Personal, familial, and social factors, as well as institutional pressures, also play important roles in shaping a student's emotional response to academics. Therefore, while addressing learning preferences is valuable, it must be part of a broader strategy to support students' mental health and academic success.

The discussion of findings highlights the need for greater awareness among educators and school administrators regarding the impact of learning style mismatches on student well-being. Kinesthetic learners, in particular, represent a group that is often underserved in traditional educational systems. By recognizing their unique needs and implementing more inclusive instructional practices, schools can play a vital role in reducing academic anxiety and promoting a more supportive, equitable learning environment for all students.

Significance of the Study

This study holds considerable significance for educators, school counselors, and researchers by highlighting the connection between kinesthetic learning preferences and academic anxiety among high school students(Bosman, 2015). In an era where student mental health and personalized education are becoming top priorities, understanding how learning styles intersect with emotional well-being is essential for creating effective, inclusive, and psychologically supportive educational environments.

One of the most practical outcomes of this study is its implication for teaching practices. The findings suggest that students with a kinesthetic learning style those who learn best through movement, hands-on tasks, and active engagement are more likely to experience academic anxiety in traditional classroom settings that rely heavily on passive learning strategies such as lectures and rote memorization. For teachers, this highlights the importance of diversifying instructional methods to include more physical and experiential learning opportunities.

Incorporating kinesthetic activities such as role-playing, simulations, project-based learning, and lab experiments can enhance engagement and comprehension while simultaneously reducing anxiety levels in kinesthetic learners(Wildhaber Jr, 2010). Additionally, allowing movement breaks, using manipulatives, and encouraging active participation can foster a more comfortable and supportive learning environment. By recognizing and responding to students' learning preferences, teachers can play a pivotal role in preventing unnecessary academic stress and promoting emotional well-being.

From a theoretical perspective, this study contributes to the growing field of educational psychology by offering empirical evidence that supports the relevance of learning styles in understanding student behavior and emotional health. It reinforces the need for educational models that consider both cognitive and affective dimensions of learning. The study also provides insights for classroom management by identifying a link between student disengagement or restlessness and unmet kinesthetic needs. Educators can use this understanding to develop proactive classroom strategies that accommodate diverse learners and reduce behavioral issues that may stem from frustration or anxiety.

Moreover, the study encourages a shift away from one-size-fits-all teaching approaches toward more adaptive and learner-centered pedagogies. This is especially important in managing classrooms where student performance and behavior are deeply influenced by how well their learning needs are being met(Grossman, 2003).

Another key contribution of this research lies in its application to school counseling. By understanding that students with kinesthetic learning preferences may be more prone to academic anxiety particularly when their learning needs are unmet school counselors can better identify students at risk of emotional or academic distress. This allows for more targeted interventions, such as academic accommodations, personalized support plans, or referrals to mental health services.

Additionally, the results of the study can guide the development of screening tools and psychoeducational programs that focus on both learning style awareness and anxiety management. Counselors can work collaboratively with teachers and parents to create strategies that help students feel more confident and less overwhelmed in their academic journey.

Scope and Limitations

The scope of this study is centered on identifying whether there is a statistically significant relationship between a student's preference for kinesthetic learning and their level of academic anxiety. It focuses specifically on high school students, particularly those in grades 10 to 12, as this age group is often under intense academic pressure and is developmentally capable of articulating learning preferences and emotional experiences.

Geographically, the study is limited to a selected region or school district, which provides a manageable and contextually relevant population sample(Holme et al., 2014). The study utilizes standardized instruments, namely the VARK Learning Styles Questionnaire and the Academic Anxiety Scale for Students (AASS), to quantify learning preferences and anxiety levels respectively. This allows for objective data collection and statistical analysis.

The study adopts a quantitative correlational design, meaning it aims to identify the presence and direction of a relationship between the two variables but does not attempt to establish causation. Additionally, the study explores the implications of its findings in the context of teaching practices, classroom management, and student counseling.

Despite its contributions, this study is subject to several limitations that must be acknowledged(Ioannidis, 2007). First, the use of self-reported questionnaires introduces the possibility of response bias, where students may overestimate or underestimate their levels of anxiety or inaccurately assess their learning preferences. While standardized tools are used, individual interpretation of questionnaire items can vary.

Second, the sample size and sampling method often constrained by time, resources, and school cooperation may limit the generalizability of the findings. If the study is conducted in a specific area or with a non-random sample, the results may not fully represent the broader population of high school students across different regions or educational systems.

Third, the study focuses solely on the kinesthetic learning style, without exploring how other learning styles (visual, auditory, or reading/writing) may also relate to academic anxiety. This narrow focus, while intentional, means the results provide only a partial view of the larger relationship between learning preferences and student well-being.

Furthermore, academic anxiety is a multifaceted issue influenced by numerous external factors such as family environment, peer pressure, socioeconomic status, academic workload, and teacher support. The study does not control for all these variables, which may act as confounding influences on the results.

Lastly, as a cross-sectional study, the research captures data at a single point in time. It does not track changes in learning style or anxiety levels over time, nor does it assess the long-term effects of interventions or changes in instructional style.

Conclusion and implication

This study aimed to examine the relationship between the kinesthetic learning style and academic anxiety levels among high school students. The findings revealed a statistically significant positive correlation between students who strongly identify as kinesthetic learners and those who report higher levels of academic anxiety. This suggests that students whose learning preferences are not supported by the dominant teaching methods in their classrooms are more likely to experience emotional distress related to academic tasks. The conclusion drawn from the study is that a mismatch between teaching strategies and learning preferences particularly for kinesthetic learners can contribute to increased academic anxiety. In educational environments that prioritize passive learning, such as listening to lectures or reading textbooks, kinesthetic learners may feel disengaged, overwhelmed, or unsupported. These emotional reactions can, in turn, affect their academic performance, motivation, and overall well-being. Teachers are encouraged to recognize and accommodate diverse learning styles in their classrooms. Integrating movement-based learning activities, hands-on projects, group work, and real-life applications into the curriculum can support kinesthetic learners and reduce the stress they often experience in traditional classroom environments. Even simple strategies such as incorporating role-plays, interactive demonstrations, or classroom mobility can enhance engagement and reduce anxiety. Curriculum developers and school administrators should consider universal design principles that allow for differentiated instruction. A more flexible and multimodal approach to teaching can benefit not only kinesthetic learners but also students with varied cognitive preferences. Embedding options for physical activity and experiential learning into everyday classroom routines can make learning more inclusive and reduce anxiety across the student body. School counselors can use the findings of this study to help identify students at risk of academic anxiety. Understanding that kinesthetic learners may be particularly vulnerable in rigid academic settings allows counselors to offer targeted interventions, such as anxiety-reduction programs, study skill workshops, or individualized support plans that align with the student's learning style. This study opens up avenues for further research, such as examining other learning styles in relation to different types of academic stress, or exploring the long-term effects of kinesthetic-inclusive instruction on student mental health and academic outcomes. It also suggests the value of mixed-method approaches and longitudinal designs to deepen understanding of how learning environments impact student psychology over time. In conclusion, this study highlights the importance of aligning educational practices with students' cognitive and emotional needs. Addressing learning styles especially for kinesthetic learners not only supports academic achievement but also promotes emotional resilience. By fostering a more inclusive and responsive educational environment, schools can play a key role in reducing academic anxiety and enhancing student well-being.

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