

A Study on Measuring Students' Anxiety in Grade XII-F Man 1 Surakarta in Facing the Academic Ability Test (TKA) Using the HARS Scale

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ABSTRACT

This study aims to identify and describe the level of anxiety experienced by twelfth-grade students of class F MAN 1 Surakarta prior to the implementation of the newly introduced Tes Kemampuan Akademik (TKA), a national assessment policy replacing the former Ujian Nasional. Using the Hamilton Anxiety Rating Scale (HARS) with 14 items scored on a 0-4 Likert scale, data were collected from 81 students of class XII-F through a census (total sampling) approach. The data were analyzed using descriptive statistics with SPSS, including tests of normality, validity, and reliability. The results show that students' anxiety scores are normally distributed, and the instrument demonstrates high validity and excellent internal consistency (Cronbach's Alpha = 0.988). Descriptively, most students fall into the moderate anxiety category (66.7%), with 17.3% in the low and 16.0% in the high anxiety category. Qualitative responses indicate that anxiety is mainly triggered by parental expectations, perceived insufficiency of preparation time, uncertainty about test content, and concerns about future academic opportunities. These findings highlight that the TKA, although officially non-determinant for graduation, is still perceived as a high-stakes exam by students, implying the need for targeted psychological support and school-based interventions to help them manage pre-exam anxiety within the context of the new assessment policy.

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Keywords:

students' anxiety;
academic ability test;
HARS scale.



INTRODUCTION

Evaluation in education is not just a procedure; It is an integral component of the system itself (Levy-feldman, 2025). However, it is important to note that not all evaluation methods can be used to measure the extent to which educational goals are achieved. In this context, the success of new education can be seen if the evaluation instrument applied is truly in accordance with its objectives, able to touch the core of what it wants to achieve (Audiwinanda & Mahmudi, 2025). Without the right measuring tools, evaluation results can be inaccurate, or even misleading. Therefore, a really relevant measuring tool is needed to ensure that the evaluation results obtained are truly valid (Sari et al., 2020).

Since 2002-2003, the final exam at the level of education in Indonesia has used the National Final Exam (UAN), which in 2005 was abbreviated to the National Exam (UN). However, the implementation of the UN caused polemics and controversies. Research by Muntholi'ah in 2004 showed that there is an injustice in the conversion of UAN grades, which is considered to be more beneficial to less intelligent students and to the detriment of smart students (Sari et al., 2020). Finally, in 2020, Minister of Education and Culture Nadiem Makarim announced that the UN would be abolished in 2021 and replaced by the Minimum Competency Assessment (AKM) and the Character Survey. AKM is no longer based on subjects or curriculum, but will map two student competencies, namely literacy and numeracy (*Asesmen Nasional*, 2022).

In 2025, the Ministry of Primary and Secondary Education (Kemendikdasmen) has issued a new policy in the form of the Academic Ability Test (TKA), which is an effort to improve the quality of education in Indonesia (Kemendikdasmen, 2025). The Academic Ability Test is designed as a parameter of academic ability for certain subjects objectively as well as a justification for the integrity of the assessment of the educational unit. Atip Latifulhayat, Deputy Minister of Primary and Secondary Education (Wamendikdasmen) explained that the Academic Ability Test (TKA) was presented as an effort to provide a fairer and trauma-free educational evaluation, replacing the National Examination (UN) system previously used. If previously the

UN was used as a determinant of graduation, now the determination of graduation is completely left to the respective educational units (Anugrahmawaty, 2024).

The subjects that will be tested in the Academic Ability Test (TKA) are crucial subjects. The subjects at the elementary and junior high school levels that are tested are Mathematics and Indonesian, while at the MA/SMA level that are tested include; Mathematics, Indonesian, English and two elective subjects that correspond to the specialization (Kemendikdasmen, 2025). TKA students at the MA/high school level and equivalent will be held in early November 2025. As for the elementary and junior high school levels, the new Academic Ability Test (TKA) will be held in 2026 (Kemendikdasmen, n.d.).

The results of the Academic Ability Test (TKA) will be the validator of the report card in the selection of university entrance to the achievement path. Although it is not mandatory and not as a determinant of graduation, MAN 1 Surakarta provides an obligation notice for grade 12 students to take part in TKA, this has an anxiety impact on students, especially high school students because the implementation will be held faster than other exams. Anxiety itself is one of the weaknesses in the test that will affect student learning outcomes (Sax, 1996; Ulfah et al, 2024).

This study aims to find out and describe the anxiety level of students in grade XII-F MAN 1 Surakarta before the implementation of the Academic Ability Test (TKA) which will be held in November 2025. Based on the latest policy of the Ministry of Primary and Secondary Education, TKA is used as a standard assessment to measure students' academic achievement with a reporting system that is not mandatory but still causes psychological pressure for students. Through the use of the Hamilton Anxiety Rating Scale (HARS) with a Likert scale of 0–4, this study measures how high the level of students' anxiety about the academic exam is in the context of new government policies.

METHOD

This study used a descriptive quantitative approach, which aims to objectively describe the phenomenon of student anxiety levels based on numerical data obtained through questionnaires (Muslihah et al., 2025; Rohimah et al., 2024). The research population is all students of class XII-F MAN 1 Surakarta, and the sampling technique used is total sampling or census, because all members of the population are made as research respondents in accordance with an approach that represents the phenomenon comprehensively (Achugbue et al., 2025).

The research instrument included a HARS scale with 14 items, each item consisted of 4 statement items with a Likert scale from 0 (none) to 4 (very heavy), resulting in a total score between 0 to 224, where the higher the score indicated the higher the level of anxiety. Respondents were asked to rate how often they experienced anxiety symptoms in the lead-up to TKA. As a consideration, the researcher also asked respondents to briefly explain what things made respondents feel anxious ahead of TKA. Each questionnaire data will be processed using descriptive statistical techniques, which calculate the distribution of frequency, average, and anxiety level categories from low to high. This approach is relevant to describe the psychological reality of students in the face of new academic assessment policies systematically and empirically (Khofifah & Amalia, 2024).

The research was carried out from October 27 to 31, 2025 offline at MAN 1 Surakarta. The population of this study is all students of grades XII-F MAN 1 Surakarta. Class F is a science specialization class. This class is divided into three classes classified based on male and female students, namely XII-F3 for male students, while XII-F2 and XII-F3 for female students.

This study obtained formal permission from MAN 1 Surakarta through Official Letter No. 2304/Ma.11.31.01./PP.00.6/10/2025, which stated that the school had no objection to the research being conducted on its premises. Given that the majority of research subjects were students under the age of 18, the researcher gave due consideration to research ethics by emphasizing the principle of voluntary participation, whereby all students who completed the research instrument did so

voluntarily, without any coercion or pressure from any party. Prior to completing the questionnaire, students were provided with an explanation of the purpose of the study, their right to decline participation or withdraw at any time without any consequences, and assurance of the confidentiality of respondents' data and identities, which would be used solely for the purposes of this research. Consent was obtained both from the school as the institution responsible for the students and from the students themselves as respondents, to ensure that this research was conducted in accordance with ethical principles governing research involving minors.

The data analysis technique uses *Statistical Product and Service* (SPSS) to make it easier to calculate respondent scores based on the value of each item on the HARS scale, then classified according to the interpretation criteria of anxiety levels (low, medium, high). The results of the research are expected to provide input for schools and policymakers to manage the psychological impact of the implementation of TKA and improve the mental readiness of high school students in facing the next Academic Competency Test.

RESULTS

The normality test was carried out to find out whether the distribution of anxiety questionnaire data for class F MAN 1 students was distributed normally or not. Based on calculations with SPSS, a skewness value of -0.012 with a standard error of 0.267 and a kurtosis value of -0.936 with a standard error of 0.529 was obtained. Therefore, the value of the skewness ratio is calculated by dividing the value of skewness by its standard of error, i.e., and the value of the kurtosis ratio is calculated by dividing the value of kurtosis by its standard of error, i.e.

$$\frac{-0,012}{0,267} = -0,045 \quad \frac{-0,936}{0,529} = -1,769$$

The value of this skewness and kurtosis ratio was then compared with a critical value of ± 1.96 at a significance level of 0.05. Since the values of the skewness ratio (-0.045) and the kurtosis ratio (-1.769) are in the range of -1.96 to +1.96, it can be concluded that the distribution data of the students' anxiety scores meets the assumption of normality (normally distributed data).

In addition to the normality test, the validity of the questionnaire instrument was tested with a significance value below 0.05, which indicates that each questionnaire item is statistically valid and measures the variables in question. As for reliability, based on the SPSS output, a *very high Cronbach's Alpha* value of 0.988 was obtained, indicating that the questionnaire has excellent internal consistency and is reliable as a measure of student anxiety.

Table 1. Instrument Statistics.

Statistics		
N	Valid	81
	Missing	0
Mean		122.72
Median		113.00
Hours of deviation		59.732
Range		224
Minimum		0
Maximum		224

Based on the data in [Table 1](#), the questionnaire data showed a mean value of 122.72, a median of 113.00, a standard deviation of 59.732, with a value range from a minimum of 0 to a maximum of 224. This indicates that the variation in anxiety scores of students in class F MAN 1 is quite diverse but distributed normally, so that the data is ready for further statistical analysis according to parametric assumptions.

Table 2. Respondent Characteristics.

Respondent Characteristics					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	30	37.0	37.0	37.0
	Women	51	63.0	63.0	100.0
	Total	81	100.0	100.0	

The total number of respondents was 81 students consisting of 30 male students (37%) from classes XII-F1, and 51 female students (58%) including 25 female students from classes XII-F2, and 26 female students from classes XII-F3.

Table 3. Student Anxiety Level.

Anxiety Level Results					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	14	17.3	17.3	17.3
	Medium	54	66.7	66.7	84.0
	Height	13	16.0	16.0	100.0
	Total	81	100.0	100.0	

The table above shows the results of the analysis of anxiety levels in 81 student respondents who are categorized into three groups, namely low, medium, and high. Data on frequency, percentage, valid percent, and cumulative percent are presented in the table above to provide a comprehensive picture of the distribution of anxiety in the study sample.

The results of the analysis showed that the majority of respondents, as many as 54 students (66.7%), were in the category of moderate anxiety. Meanwhile, low anxiety was experienced by 14 respondents (17.3%) and high anxiety was experienced by 13 respondents (16.0%). The *cumulative percent* figure shows that after calculating low and moderate anxiety, 84% of students were covered, while high anxiety closed the entire distribution to 100%.

Departing from the theory that academic anxiety is an emotional response to exam pressure that can affect students' learning performance and psychological well-being. According to Eysenck in *Attentional Control Theory*, anxiety interferes with attention function because it increases focus on worries compared to exam assignments, thereby lowering cognitive efficiency and learning outcomes (Alkowatli et al., 2022). Similar research found that high exam anxiety led to lower

academic grades and increased mental stress in students. Thus, studies regarding the measurement of students' anxiety before exams have academic and psychological urgency to understand the determinants of learning success (Steinmayr et al., 2016).

The *Hamilton Anxiety Rating Scale* (HARS) or HAM-A is a measuring tool developed by Max Hamilton in 1959 to assess the severity of anxiety symptoms through 14 items, which include psychic and somatic symptoms (Manzar et al., 2025), respectively. HARS uses a Likert scale from 0 (none) to 4 (very severe), where the higher the score indicates the higher the level of anxiety. This scale is recognized as the gold standard for research and clinics in the field of psychology, and has been validated in adolescent and college students with reliable and valid results. This makes HARS relevant to be used to measure pre-exam anxiety among aliyah madrasah students who are facing academic pressure (Clark & Donovan, 1994).

Theoretically, anxiety in students before an exam can be influenced by a variety of internal and external factors. Internal factors include personality, self-efficacy, and emotion regulation, while external factors include family support, social pressure, and a history of academic achievement. International studies show that a good relationship with parents can lower anxiety levels, while perfectionist demands are precisely.

DISCUSSION

The discussion of research results includes an interpretation and analysis of the findings. References to journal articles can be included in the discussion to support the research findings and compare the results obtained. The discussion should explore the significance of the results of the work, not repeat them. In the discussion, it is the most important section of your article. Here you get the chance to sell your data. Make the discussion corresponding to the results, but do not reiterate the results. Often should begin with a summary of the main scientific findings. The meanings of the findings should be shown from current theories and references of the area addressed.

In the discussion section, you are comparing and contrasting the findings of the current research with those from the previous research or the supporting theories.

There should be a similarity and contrast analysis. The following components should be covered in discussion: (a) How do your results relate to the original question or objectives outlined in the Introduction section? What is your finding of research? (what/how)? (b) Do you provide interpretation scientifically for each of your results or findings presented (why)? This scientific interpretation must be supported by valid analysis and characterization (why)? (c) Are your results consistent with what other investigators have reported (what else)? Or are there any differences?

The results of the anxiety level measurement showed variations in students' emotional responses when facing the Academic Ability Test (TKA). Based on the distribution of the HARS Scale score analyzed, the majority of students were in the category of moderate anxiety, namely 54 students (66.7%). These findings show that academic evaluation situations, especially high-risk tests such as TKA, pose significant tensions for most respondents. This condition is in line with the literature that states that students in adolescence often perceive exams as a threat to self-esteem, achievement, and social environmental expectations (Zeidner, 2014).

The next category was low anxiety, found in 14 students (17.3%). In the group of students with low anxiety levels, the vice principal suggested that one of the possible causes was low interest in continuing education to college or indifference to the consequences of the Academic Ability Test (TKA) scores. This suggests that low anxiety is not always synonymous with an adaptive psychological state. In the context of achievement motivation, several studies explain that exam anxiety is greatly influenced by a combination of *expectancy* and the value given by individuals to a task (*task value*) (Eccles & Wigfield, 2002). Students who do not intend to continue their studies to college or do not consider foreign workers as something important tend to give low scores to the test, so the psychological pressure that arises before the exam is also minimal. This is in line with the view of *control-value theory* which states that academic emotions, including anxiety, are greatly influenced by the extent to which students feel the task is important and relevant to their personal goals (Pekrun, 2024).

Meanwhile, there were 13 students (16.0%) who were in the category of high anxiety. This group is of particular concern because increased levels of anxiety can have a direct impact on decreased concentration, working memory ability, and overall academic performance. Previous research has shown that high academic anxiety is often associated with feelings of fear of failure as well as negative perceptions of self-worth (Sarason, 1984). In this context, follow-up in the form of psychopedagogical interventions, emotional assistance, or relaxation technique training is needed so that students can manage their anxiety before facing the test.

If viewed as a whole, out of 81 students, there was no extreme category such as very high anxiety, so it can be concluded that the level of anxiety in this population is still within the range that can be addressed with an educational approach. The distribution pattern dominated by the medium category also suggests that test anxiety is a common phenomenon, not a purely individual problem. This is in line with the understanding that anxiety serves as an adaptive response that arises when individuals face academic demands or challenges (Barlow, 2002).

Factors That Trigger Student Anxiety

Based on the answers to the open description given to the students, a deeper picture was obtained about the source of their anxiety ahead of the Academic Ability Test (TKA). As many as about 90% of respondents, both with low, moderate, and high anxiety, were able to name and explain the reason for the anxiety they felt, so it was seen that the anxiety was not just a general symptom, but related to a specific and conscious source of psychological distress.

First, most students cite high expectations from parents as anxiety triggers. They feel that they have to achieve a certain value so as not to disappoint their parents and family. These findings are in line with research showing that excessive demands and expectations from parents can increase exam anxiety and decrease students' psychological comfort (D. Putwain, 2007). In the framework of *control-value theory*, parental expectations increase the "value" of tasks, but when not balanced with perceived *control*, it actually triggers negative emotions in the form of anxiety (Pekrun, 2024).

Second, students expressed anxiety because they were worried the academic competency test from TKA material might not in accordance with what they had learned, coupled with the short learning time. These concerns reflect a perception of low control over test demands. They are not sure if the limited study effort will be enough to deal with the variety of questions that may arise. It shows that uncertainty in the scope of the material and perceived lack of preparation is a strong predictor of exam anxiety, especially when the preparation time is short and information about the form and scope of the test is considered less clear, so that the feeling of unpreparedness is stronger in students who are perfectionists or very afraid of failure.

Third, many students associate their anxiety with worries about the future, particularly fears that failure on foreign workers will affect their chances of going to college and interfere with their long-term life plans. This is understandable because TKA at MAN 1 Surakarta not only functions as a diagnostic test, but also as an instrument for ability selection and report card validation for the achievement path to higher education. In other words, foreign workers are perceived as "*high-stakes exams*" that have real consequences for student educational mobility. The literature shows that when a test is considered to be highly predictive of the future, the intensity of anxiety tends to increase, especially in students who have high academic aspirations (D. W. Putwain & von der Embse, 2018).

Interestingly, the three sources of anxiety appear in almost all categories of anxiety levels, both low, moderate, and high. The difference is not in the presence or absence of the source of anxiety, but in the degree of intensity and the way students interpret the pressure. In students with moderate and high anxiety, parental expectations, material uncertainty, and worries about the future seem to lead more to feelings of threatened and fear of failure. While in some students with low anxiety, the same factors may still be realized, but they have a more adaptive coping strategy or, as explained by the vice principal, some of them do not associate the results of TKA with the continuing education plan so that the emotional impact becomes weaker.

CONCLUSION

Based on the results of the study, it can be concluded that the anxiety level of students in grades XII-F MAN 1 Surakarta ahead of the implementation of the Academic Ability Test (TKA) is dominated by the category of moderate anxiety, with some students in the low category and some in the high category. The normal distribution of anxiety scores as well as the HARS instrument that has been proven to be valid and highly reliable suggests that the anxiety measurements in this study can be trusted as a picture of the psychological state of students.

The most prominent sources of anxiety come from parents' expectations of TKA results, perceptions of limited time and learning readiness, uncertainty about the scope of exam materials, and concerns about the consequences of TKA's grades on the opportunity to continue their education to college. This condition shows that foreign workers are still perceived as high-stakes exams even though they are no longer the determinant of graduation in policy. Therefore, the school needs to take strategic steps in the form of socialization that emphasizes the proportional function of foreign workers, the provision of guidance and counseling services, learning assistance, and stress and anxiety management training so that students are better prepared mentally to face foreign workers and similar academic assessments in the future.

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