



## Validation of Examination Anxiety Behaviour Scale among Senior Secondary School Students in Orhionmwon Local Government, Edo State

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### ABSTRACT

*This study was geared toward the validation of the examination anxiety behaviour scale. Two research questions that were asked and their corresponding objectives of the study were to: determine the content and construct validity of the examination anxiety behaviour scale, and ascertain the reliability of the examination anxiety behaviour scale. 50 copies of the questionnaire containing 21 items were administered to the participants in the study. Factor analysis was used to validate 13 items. The principal component analysis (PCA) revealed a four-factor structure that accounted for content validity. F1: Physiological component, 4 items (1, 2, 3, and 4) = 15.87%, F2: emotional component, 5 items (5, 6, 7, 8 and 9) = 15.35%, F3: Cognitive component, 3 items (10, 11 and 12) = 14.81% and F4: Behavioural component, 1 item (13) = 10.87. The total variance explained was 56.90. The factor-loading matrixes were used to factor out related items that described a particular component. The factor loaded between .40 and .80. This explained good construct validity. The examination anxiety behaviour scale had a Cronbach's alpha reliability coefficient of .71. The researchers recommend this scale for use by all researchers who are interested in the welfare of the students to solve examination anxiety behaviour.*

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### INTRODUCTION

Examination anxiety behaviour is a common problem experienced among students in the school system, but educators in Nigeria have paid less or no attention to it, rather they focus on the consequences of examination anxiety behaviour such as poor academic performance, truancy, the school dropped out, examination malpractice, cultism and so forth.

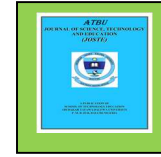
The examination is designed to measure the achievement of students in the subject or content areas over a period of learning. The outcome of this examination serves as feedback to the students and the teacher. The consciousness and curiosity about the outcome of the examination have generated a lot of negative reactions towards the examination to the extent the students become vulnerable to anxiety.

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This is why Olanrevaju and Adeoye (2018) lamented that examination anxiety behaviour is one of the problems encountered by many Nigerian adolescent students. They further stated that prolonged examination anxiety behaviour when not corrected can be detrimental to the physical and psychological well-being of the students and this can hinder the development of adolescents' skills after school.

Abbasi and Ghosh (2020) defined examination anxiety behaviour as unpredictable worries about the consequence regarding performance, fear of being assessed, and apprehension about the result. They further categorized these symptoms under four dimensions, such as:

**Physical** - extreme body temperature changes, headache, sweating, rapid heartbeat, shortness of breath, light-headedness among other symptoms.

**Emotional** - a feeling of helplessness, anger, excessive feelings of fear, uncontrollable crying, disappointment, depression,

**Behavioural** - substance abuse, fidgeting, avoidance, pacing,

**Cognitive** - negative thinking, the difficulty of organizing thoughts, negative self-talk, racing thoughts, comparing yourself to others, "going blank", difficulty concentrating, and feelings of dread.

In this study, examination anxiety behaviour is defined as all expressions related to cognitive, physiological, emotional, and behavioural responses in connection with examination participation that impede students' performance in the school system. Kaur and Kumaran (2016) defined examination anxiety as a

condition characterized by worries which arise in test situations with the symptoms of common anxiety. Such as giddiness, shivering of limbs, disturbed sleep, insecurity, elevated heartbeat, and feel of dread, include the symptoms of anxiety. They further stated that these symptoms are demonstrated to hamper the test performance of students by altering cognitive, affective, and conative processes related to testing situations.

The literature revealed that examination anxiety behaviour, when dominated in students' minds impaired their performance, in terms of low grades (Mittu & Nandana, 2020; Hamzah et. al, 2018; Brand & Schoonheini, 2009). There is no doubt Asghari et. al, (2013) stated that one of the most prevalent psychological issues among students in an academic setting is anxiety associated with exams, exceeding expectations, and pressure at school may be one of the most common concerns made by pupils, especially among teenagers.

Examination anxiety is a topical issue in the field of education and psychology. This is because some of the students experience a lot of headaches, sweating, rapid heartbeat, helplessness and excessive feelings of fear, uncontrollable crying, disappointment, and depression during an examination and this needs the urgent attention of researchers in the educational system to curb to reduce the excesses among the students. This study was designed to validate the examination anxiety behaviour scale because the scale would be used to elicit responses from the students about their experience of anxiety during an examination. In the Middle East, specifically, India, an examination anxiety scale was

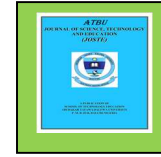
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developed by Abashi and Ghosh (2020), which incorporated four components. Some of the items in the scale were double-barreled which was not corrected before their publication. This present study was structured to validate the examination anxiety behaviour scale using senior secondary school students in Orhionmwon Local Government, Edo state, Nigeria.

**Research Questions**

1. What is the content and construct validity of the examination anxiety behaviour scale?
2. What is the reliability of the examination behaviour scale?

**Objectives of the Study**

The objectives of the study are:

1. to determine the content and construct validity of the examination anxiety behaviour scale,
2. to ascertain the reliability of the examination anxiety behaviour scale,

**METHODOLOGY**

This study was a survey design that sought to validate the examination anxiety behaviour scale. A sample of 50 senior secondary school students in Orhionmwon Local Government, Edo

State was used in this study. The instrument titled: Examination Anxiety Behaviour Scale was made up of 21 items from Abashi and Ghosh (2020) that consisted of four components.

The four-point format was used in scoring items with options of Strongly Agree (SA) = 4, agree (A) = 2, disagree (D) = 2, strongly disagree (SD) = 1 while the negative items were scored at reversed, such as Strongly Agree (SA) = 1, agree (A) = 2, disagree (D) = 3, strongly disagree (SD) = 4. Fifty (50) copies of the questionnaires were administered to senior secondary school students in Orhionmwon Local Government Edo State. All the copies were retrieved and subjected to analysis. The content and construct validity were estimated with factor analysis through Principal Component Analysis (PCS) and using Kaiser Normalization Rotation Method. Of the 21 items, only 13 items were valid. The internal consistency of the instrument was ascertained through the Cronbach Alpha reliability method.

**RESULTS**

The results are shown in the tables below.

**Research Question 1:** What is the Content and Construct Validity of the Examination Anxiety Behaviour Scale?

**Table 1:** Content Validity Estimates of Examination Anxiety Behaviour Scale (EABS),

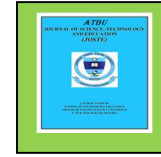
S/N	components	No of Items	Explained Variance%	Unexplained Variance%	Total%
1	Physiological	4	15.87	9.13	
2	Emotional	5	15.35	9.65	
3	Cognitive	3	14.81	10.19	
4	Behaviour	1	10.87	14.13	
	Ground Total	13	56.9	43.1	100

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The scale extracted four components of physiological symptom, emotional symptom, cognitive symptom, and behavioural symptom expressed the content validity as the percentage of all

items in each component had 15.87%, 15.35%, 14.81%, and 10.87% respectively. This yielded a total explained variance of 56.91%. The variance unexplained is about 43%.

**Table 2:** Principal Component Analysis (PCS), Rotation Method, Varimax with Kaiser Normalization and Communalities Indicating the four Factor Structure Construct Validity of Examination Anxiety Related Behaviour Scale (EABS)

S/N	Items	F1	F2	F3	F4	h2
Old						
3	1 While taking an examination I feel very free.	.80				.67
2	2 During the examination I often feel pressed to go toilet.	.64				.69
11	3. During an examination, I suffer from a headache.	.61				.69
4	4 Even after preparing well for the examination, I feel very nervous.	.41				.38
5	5 I am always concentrated during the examination.		.65			.69
16	6. I have thought of diversion during the examination.		.72			.55
12	7. I feel relaxed while taking an examination.		.66			.60
20	8. I feel comfortable when taking the examination.		.63			.49
19	9. I experience dryness in my mouth whenever I am engaged in an examination.		.58			.31
21	10. During an examination, I do not think other students are brighter than me.			.74		.58
8	11. I do worry about my performance during an examination .			.75		.68
6	12. My hands are free while writing an examination.			.69		.59
10	13. Sometimes, I shake during an examination.				.77	.61

Okorodudu and Nwakakego (2015), Abashi and Ghosh (2020) agreed that items having factor loading matrixes exceeding .40 would contribute a meaningful measure of traits to each component or factor. Therefore, in this present study, the factor loadings exceeded .40 with a range between .41 and 80. The researchers conclude that the examination anxiety behaviour scale had good construct validity.

**Factor 1:** Physiological component, 4 items (1, 2, 3 and 4), measured physiological symptoms which loaded between .41 and .80.

**Factor 2:** Emotional component, 5 items (5, 6, 7, 8, and 9, measured emotional

symptoms which loaded between .58 and .72.

**Factor 3:** Cognitive component, 3 items (10, 11 and 12), measured cognitive symptoms that loaded between .69 and 75.

**Factor 4:** Behavioural component, 1 item (13), measured behavioural symptoms that loaded only .77.

**Research Question 2:** What is the Reliability of the Instrument?

To estimate the internal consistency of the instrument, the Cronbach Alpha reliability method was established using SPSS which yielded an alpha value of 0.71. Daud et al. (2018)

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stated that Alpha Cronbach's value above 0.6 is considered high reliability and acceptable index. Since the scale had a Cronbach alpha value of 0.71. The

researcher concluded that the examination anxiety behaviour scales had good measures of internal consistency as shown in table 3 below.

**Table 3:** Reliability of Examination Anxiety Behaviour Scale (EABS),

Cronbach's Alpha	Cronbach Alpha based on Standardized items	No of items
.71	.71	13

### CONCLUSION AND RECOMMENDATIONS

The examination anxiety behaviour scale had a good measure of internal consistency which was established through the Cronbach's alpha reliability method. The content and construct validity were estimated with factor analysis through Principal Component Analysis (PCS) and using Kaiser Normalization Rotation Method. This showed good content and construct validity of the scale. Since this scale had good content and construct validity as well as high psychometric property, therefore, the researchers recommend this scale for use by all researchers who are interested in the welfare of the students to solve examination anxiety behaviour problems.

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