

**PSYCHOMETRIC ASSESSMENT OF DEPRESSION ANXIETY STRESS SCALE (DASS-21) AMONG SECONDARY SCHOOL STUDENTS IN DELTA STATE: IMPLICATIONS FOR EMOTIONAL COUNSELLING**

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**ABSTRACT**

Mental health problems are becoming a major concern among Nigerian secondary school students, hence the need for relevant and dependable metrics for evaluating these problems. The psychometric qualities of the DASS-21 scale must be assessed in this population to ensure its utility. The study validated the scale's dimensionality, item fit, suitability of answer categories, and reliability using Rasch Model. Participants included 950 secondary school students from different schools across the three senatorial districts of Delta State, Nigeria. The scale showed a single dimension (unidimensionality), indicating that the items are moderately difficult and appropriate for the target population. The scale is sensitive to differences in emotional distress levels among respondents. Also, the person reliability value was 0.806 and the item reliability value was 0.9315, indicating that the Rasch model reliably measured the latent trait of interest in the amongst of secondary school students in Nigeria. The study recommended that the DASS-21 scale can be used as a valid tool for the assessment of mental health problems in secondary school students in Nigeria.

**Keywords:** Psychometric properties, DASS-21 scale, Rasch model, Secondary school students, Mental health

James et al., 2017; Obiechina &

Isiguzo, 2016; Frank-Briggs & Alitcor, 2010). Hence, having relevant and dependable metrics for evaluating mental health problems in this group of students is essential. The Depression Anxiety Stress Scales (DASS-21) (Lovibonds & Lovibond, 1996), which has been

**INTRODUCTION**

Amongst Nigerian secondary school students, mental health problems such as anxiety, depression, and stress are becoming a major concern (Adewuya & Oladipo, 2020; Esan et al., 2019;

extensively utilized in academic and therapeutic settings, is one such measurement (Priya et al., 2020; Saricam, 2018; Rao & Ramesh, 2015).

To ensure its utility, its psychometric qualities must be assessed in the Nigerian environment. There is little study on the psychometric qualities of the DASS-21 scale among youths in Nigeria, despite the fact that it has been used extensively in a variety of groups in Nigeria (Awotidebe et al., 2022; Igbokwe, 2020). There is a dearth of research on the application of the Rasch model in the psychometric analysis of DASS-21 in Nigeria, despite the fact that the Rasch model has been used in validating the DASS-21 in several countries in Europe (Cowles & Medvedev, 2022), and Australia (Parkitny et al., 2012; Belvedere & Morton, 2010). This knowledge gap emphasizes the need for more study on the application of the Rasch model to the psychometric evaluation of mental health measures, which might assist to increase the validity and reliability of these scales.

A contemporary psychometric technique called the Rasch model enables the evaluation of rating scale quality, item fit, and the reliability of the underlying concept being assessed

by the scale (Alordiah, 2015; Belvedere & Morton, 2010). This study uses the Rasch model to assess the psychometric qualities of the DASS-21 scale among secondary school students in Delta State, Nigeria. The results of this study will be helpful in understanding the psychometric characteristics of the DASS-21 scale and how well it may be used to assess mental health problems in Nigerian secondary school students. Also, the study will help in the creation of efficient counselling therapies to deal with mental health difficulties in this group. . Further, this study will add to the body of knowledge on the psychometric characteristics of the DASS-21 scale and its applicability in identifying mental health problems in Nigerian secondary school students.

Anxiety, depression, and stress are becoming more common among teenagers and young people across the world (Merikangas et al., 2022; Karyotaki et al., 2020; Auerbach et al., 2018; Kessler et al., 2015; Sahoo & Khess. 2010). According to the World Health Organization (WHO), half of all mental diseases start before the age of 14, and one in six persons in the world between the ages of 10 and 19 have a mental problem (WHO, 2022). Nigeria, where the prevalence

of mental disease is high and the mental health system is poor, is not an exception to this trend (Lund et al., 2019). In Nigeria, secondary school students' mental health difficulties are especially concerning since they might negatively impact their academic performance, social interactions, and future chances (Nkoma, 2020; Nwadinigwe & Azuka-Obieke, 2012). Thus, it is critical to have relevant and reliable metrics to evaluate mental health concerns in this group.

A popular self-report tool that evaluates the intensity of depression, anxiety, and stress symptoms is the Depression Anxiety Stress Scales (DASS) (Lovibond & Lovibond, 1995). The DASS has been adapted for usage in several languages and cultural contexts (Henry & Crawford, 2005; Osman et al., 2012). The DASS has proven to have strong psychometric qualities after being evaluated in several populations throughout the world (Thiyagarajan et al., 2022; Saricam, 2018; Tran et al., 2013). The DASS has been used in a few studies in Nigeria among a variety of demographics, including medical professionals and undergraduate students (Sekoni et al., 2022; Olatunji et al., 2014; Oladiji et al., 2009). The psychometric features

of the DASS-21 among Nigerian secondary school students, however, have received less attention from researchers.

Due to its capacity to deliver reliable measurement data and statistical analysis, the Rasch model is a psychometric technique that has grown in popularity in recent years (Linacre, 2002). The Rasch model offers data on a scale's dependability, dimensionality, item fit, and general rating scale quality (Zile-Tamsen, 2017). The DASS and other measures' psychometric qualities have been evaluated in studies using the Rasch model (Suryadi et al., 2020; Tabatabaee-Yazdi et al., 2018; Amin et al., 2012). The DASS-21's psychometric characteristics among Nigerian secondary school students The current study sought to assess the psychometric qualities of the DASS21 scale among secondary school students in Delta State, Nigeria, using the Rasch model. To the best of our knowledge, this is the first study to evaluate the DASS-21's psychometric features among Nigerian secondary school students using the Rasch model.

The term "dimensionality" describes how well a scale's elements reflect a single underlying notion (Alordiah,

2022). Previous research has looked at the DASS-21 factor structure and found that it has strong factor validity (Le et al., 2017; Randall et al., 2017). To our knowledge, no study has looked at the dimensionality of the DASS-21 among secondary school students in Nigeria. To ascertain how much each item on a scale contributes to measuring the construct being evaluated, item fit analysis is utilized (Alordiah, 2022). Research have used the Rasch model to analyze the item fit of the DASS-21 in a variety of groups, including clinical samples and university students, and the findings have shown that the item fit is generally good (Thiyagarajan et al., 2022; Saricam, 2018)). Nonetheless, it is crucial to assess the DASS-21's item fit among Nigerian secondary school students in order to make sure that the scale's items are measuring the intended construct and to spot any problematic ones that would need to be revised. Using rating scale analysis, you may check how well the rating scale categories work and make sure that respondents are using and interpreting them consistently (Alordiah, 2022). Studies have shown that the four categories of the DASS21's four-point rating scale are effective across a range of demographics (Le et al., 2017; Tran et al., 2013). To make sure the DASS21

rating scale is operating as intended, it is crucial to assess the categories of the rating scale among Nigerian secondary school students. The Wright Person Map is a visual representation of the distribution of people and things on a similar scale that shows where people are in respect to the level of the construct that is being assessed (Boone, 2016). The Wright person map may be used to locate any out-of-place objects or people and to determine the degree of difficulty of the objects. The Wright person map has been beneficial in finding groups of persons with comparable values of the construct being evaluated in earlier investigations (Bond et al., 2020). The Wright person map will be used in this study to show the distribution of people and things on the same scale and to spot any out-of-place people or things.

The consistency of a scale in measuring a construct is referred to as reliability, and it may be calculated using a variety of techniques, such as Cronbach's alpha and the Rasch model (Bond et al., 2020). Research utilizing both Cronbach's alpha and the Rasch model have shown the DASS-21 to have high reliability estimates (Saricam, 2018; Parkitny et al., 2012). In this study, the Rasch

model will be used to assess the DASS-21's reliability.

### **Objectives of the Study**

The broad objective of this study was to assess the psychometric qualities of the DASS-21 scale among secondary school students in Delta State, Nigeria, using the Rasch model. Hence, the specific objectives of this study are to:

1. Determine is the fit statistics of the DASS-21 for Rasch Model
2. Examine the dimensionality and local independence of the DASS-21
3. Measure the (difficulty index) of the items in the DASS-21
4. Order the response option thresholds of the DASS-21
5. Determine the reliability of the DASS-21

### **Research Questions**

1. What is the fit statistics of the DASS-21 for Rasch Model?
2. What is the dimensionality and local independence of the DASS-21?
3. What is the Measure (difficulty index) of the items in the DASS-21?
4. What is the ordering of the response option thresholds of the DASS-21?

5. What is the reliability of the DASS-21?

## **METHODOLOGY**

**Research Design** The research design for this study is the instrumentation design.

Instrumentation design refers to the process of developing and selecting appropriate tools and measures for collecting data in a research study. It involves identifying and designing instruments, such as surveys, questionnaires, or observation protocols, that accurately capture the variables of interest, ensuring data reliability and validity for the study's objectives. We used Instrumentation design to ensures that the data collection tools, such as surveys, tests, or observation protocols, are well-designed, reliable, and valid, allowing the researcher to gather accurate and meaningful data to address their research questions or hypotheses.

### **Participants**

The population of this study was the 465 public secondary schools in Delta State, Nigeria. Through multistage sampling technique, one Local Government Area (LGA) was chosen from each of the three sanetoral district in the state. From each of the three LGA, seven schools were

selected. Fifty students were randomly selected from the senior classes (SS1 – SS3) from each of the 21 public secondary schools. The sample size came to 1050 students. However, due to the response rate of 90.5%, the sample size was reduced to 950, consisting of 390 (41.6%) males and 550 (58.4%) females. The students were from different schools across the three senatorial districts of Delta State, with 303 (32.4%) students from Delta South, 271 (28.8%) from Delta Central, and 366 (38.8%) from Delta North. In terms of school type, more participants attended public schools (53.7%) than private schools (46.3%). Regarding class level, the highest number of participants were in SS3 (40.7%), followed by SS2 (31.5%) and SS1 (27.8%). The mean age of the participants was 15 years with a questionnaire that measures the three dimensions of emotional distress: depression, anxiety, and stress. Each sub-scale has seven items. The likert scale used for this scale ranges from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time). The total score for each of the sub-scale ranges from 0 to 21. The higher the scores, the higher the levels of depression, anxiety, and stress.

standard deviation of 4.7

### **Instrumentation**

The Depression Anxiety Stress Scale (DASS-21) was used to assess the psychological distress of the students. The DASS-21 is a 21-item self-report questionnaire that measures the three dimensions of emotional distress: depression, anxiety, and stress. Each sub-scale has seven items. The likert scale used for this scale ranges from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time). The total score for each of the sub-scale ranges from 0 to 21. The higher the scores, the higher the levels of depression, anxiety, and stress.

**Procedure/Ethical approval** Ethical approval was obtained from the relevant authorities before the commencement of the study. The students were informed about the purpose of the study and were given the option to participate voluntarily. They were assured of the confidentiality of their responses and were allowed to withdraw from the study at any time. The students completed the DASS-21 questionnaire during school hours

under the supervision of trained research assistants.

**Data Analysis**

The data were analyzed using the Rasch model to determine the psychometric properties of the DASS-21 scale. The Rasch model is a one-parameter logistic model that is used to analyze the responses to a questionnaire on a dichotomous or polytomous scale. The model computed to describe the demographic characteristics of the participants.

estimates the location of each item and the ability of each participant on a single dimension, allowing for the estimation of item difficulty and person ability. The model fit was evaluated using the infit and outfit statistics, and items with poor fit were removed from the scale.

Statistical Package for Social Sciences (SPSS) version 25 and RStudio were used for the data analysis. Descriptive statistics were

**RESULTS**

**Table 1: The Fit Statistics of DASS-21**

Items	Infit	Outfit
A7 I was aware of dryness of my mouth	0.924	0.920
A6 I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)	0.973	0.973
A5 I experienced trembling (e.g., in the hands)	0.921	0.918
A4 I was worried about situations in which I might panic and make a fool of myself	0.858	0.858
A3 I felt I was close to panic	0.910	0.908
A2 I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0.965	0.960
A1 I felt scared without any good reason	0.901	0.894
D7 I couldn't seem to experience any positive feeling at all	0.976	0.972
D6 I found it difficult to work up the initiative to do things	0.852	0.848
D5 I felt that I had nothing to look forward to	1.016	1.019
D4 I felt down-hearted and blue (sad)	0.978	0.976

D3 I was unable to become enthusiastic about anything	1.050	1.050
D2 I felt that life was meaningless	1.110	1.107
D1 I felt I wasn't worth much as a person	1.040	1.038
S7 I felt that I was rather touchy	1.282	1.278
I was intolerant of anything that kept me from getting on S6 with what I was doing	1.186	1.192
S5 I found it difficult to relax	1.144	1.147
S4 I found myself getting agitated	1.199	1.203
S3 I felt that I was using a lot of nervous energy	1.081	1.082
S2 I tended to over-react to situations	1.098	1.104
S1 I found it hard to wind down	1.145	1.149

**Research Question One:** What is the item fit of the DASS-21 for the Rasch Model?

Table 1 presents the summary statistics of the item fit for the Rasch model. The measures in the table are the mean square fit statistics, which are used to evaluate the degree of fit of the items to the Rasch model. The infit and outfit mean square statistics are measures of the degree of fit between the observed responses and the model predictions. These measures assess the extent to which an item functions as expected based on the model's assumptions. An infit mean square value between 0.5 and 1.5 indicates a good fit. The ICC for the nine items in figure 1 is good examples of a fit items. All the items in the DASS-21 have good fit.

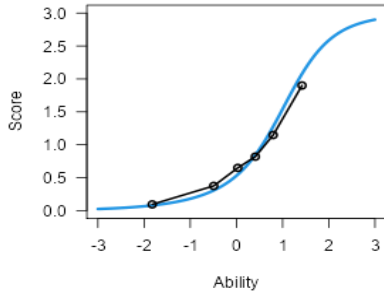
1.5 indicates a good fit, and values outside this range indicate misfit. In

Table 1, all the infit mean square values fall within this range, indicating that all the items fit the Rasch model well. Similarly, an outfit mean square value between 0.5 and 1.5 indicates a good fit, and values outside this range indicate misfit. In Table 1, all the outfit mean square values fall within this range, indicating that all the items fit the Rasch model well. The infit and outfit mean square statistics indicate that the items fit the Rasch model well and that the model is a good fit for the data. The closer the line with the dots is closer to the smooth curve (ICC), the better the fit.

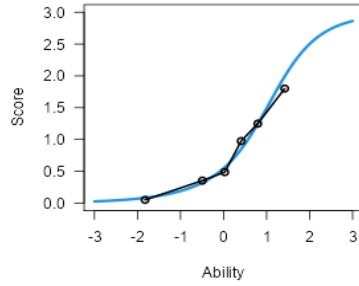
**Figure 1: ICC of Nine Items in DASS-21**



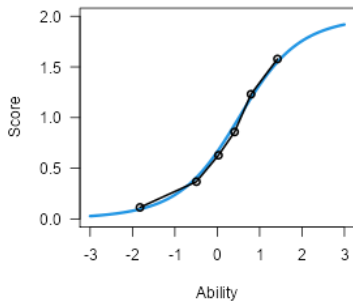
**Expected Scores Curve - Item S1**



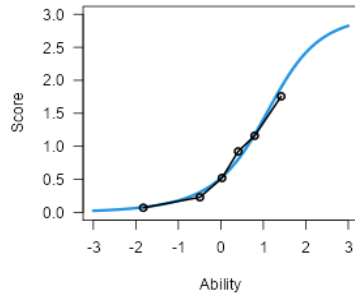
**Expected Scores Curve - Item S2**



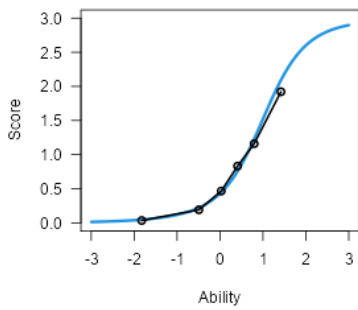
**Expected Scores Curve - Item D5**



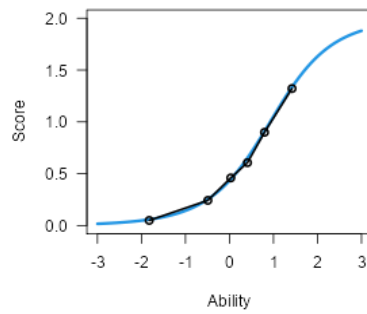
**Expected Scores Curve - Item S3**

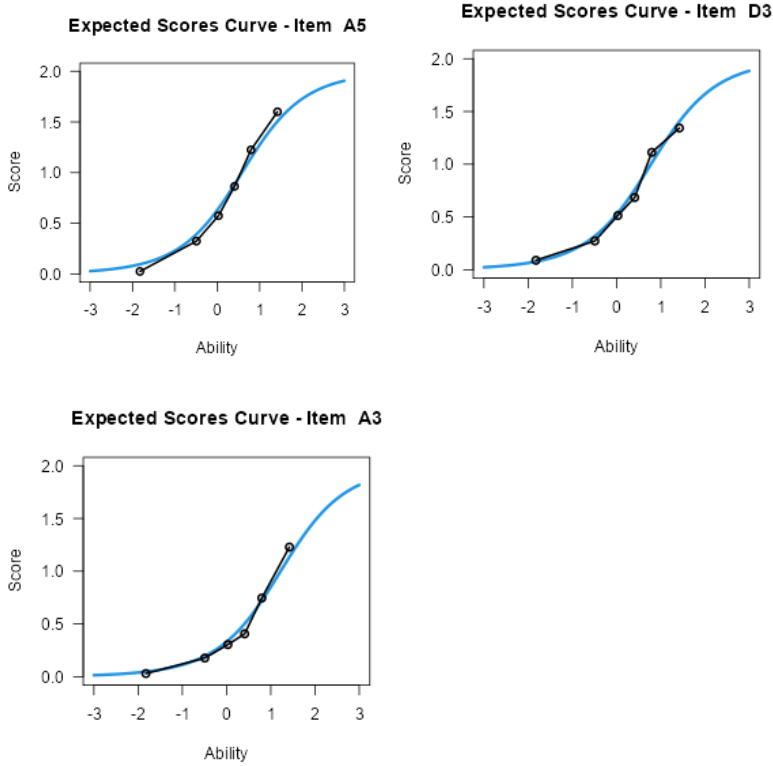


**Expected Scores Curve - Item S7**



**Expected Scores Curve - Item D2**





**Research Question Two:** What is the Measure (difficulty index) of the items in the DASS-21?

**Table 2: Measure and Category Thresholds**

			Threshold		
A7	16	0.958	0.4344	0.941	1.501
A6	21	0.840	0.2341	0.735	1.292
A5	07	0.759	0.1226	0.623	1.180
A4	06	0.679	0.0248	0.525	1.082

S/N			1	2	3
Measure	Threshold				
S/N	Measure		1	2	3
A3	17	0.928	0.4055	0.906	1.463
A2	14	0.973	0.4650	0.966	1.522
A1	13	0.727	0.2268	0.727	1.284
D7	04	0.789	0.3299	0.830	1.387
D6	05	0.681	0.1555	0.656	1.213
D5	08	0.557	-0.0222	0.478	1.035
D4	11	0.532	-0.0457	0.455	1.012
D3	19	0.614	0.0623	0.563	1.120
D2	09	0.673	0.1438	0.644	1.201
D1	18	0.373	-0.1783	0.322	0.879
S7	01	0.702	0.2552	0.756	1.313
S6	10	0.661	0.1854	0.686	1.243
S5	12	0.645	0.1891	0.690	1.246
S4	03	0.791	0.3247	0.825	1.382
S3	15	0.733	0.2414	0.742	1.299
S2	02	0.683	0.2035	0.704	1.261
S1	20	0.649	0.1988	0.699	1.256

Note. The Thurstonian threshold for a score category is defined as the ability at which the probability of achieving that score or higher reaches 0.50.

The measure column in Table 2 represents the estimated level of emotional distress (i.e., the construct being measured by the DASS-21

scale) associated with each item on the scale. The measure is expressed in logits, which is a unit of measurement used in item response theory (IRT) to

quantify the relationship between the respondent's ability level and the probability of endorsing a particular response category. In this case, the measure reflects the emotional distress level that is required to endorse a particular response option (e.g., "Never," "Sometimes," "Often," or "Almost always") for each item on the DASS-21 scale. For example, for item A6, the measure is 0.840 logits, indicating that respondents with a level of emotional distress greater than or equal to 0.840 logits are equally likely to endorse the response option "Sometimes" as they are to endorse the response option "Never." The measure column is important because it allows researchers to compare the difficulty level of different items on the scale and to estimate the level of emotional distress associated with different response options. This information can be used to improve the validity of the DASS-21 scale and to ensure that it accurately measures emotional distress in the target population. In general, however, the difficulty level

**Research Question Three:** What is the ordering of the response option thresholds of the DASS-21? Table 2 shows the partial credit model, which is a type of Rasch model that allows for different thresholds for each category. The table presents the

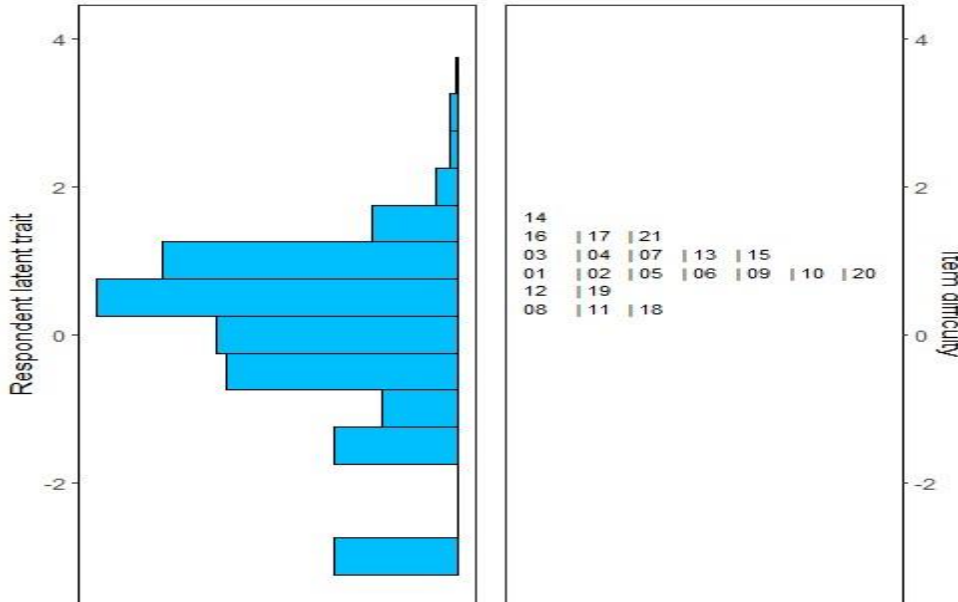
of the items should be such that respondents with a range of emotional distress levels can provide meaningful responses. If the items are too difficult, many respondents may be unable to provide an answer or may be forced to guess, which could reduce the accuracy of the scale. If the items are too easy, they may not provide enough information to differentiate between respondents with different levels of emotional distress. In Table 2, the item measures range from 0.373 to 0.973. This range indicates that the items are moderately difficult, with some items being more difficult than others. Therefore, we can conclude that the items are not too difficult or too simple overall. The most difficult item in the DASS-21 scale is item A2 with a measure of 0.973. The simplest item on the DASS-21 scale is item D1 with a measure value of 0.373. Based on the information provided in Table 2, it appears that the difficulty level of the items on the DASS-21 scale is appropriate for the target population of secondary school students in Delta State, Nigeria (see figure 1).

thresholds for each category, measured on the latent trait continuum. The thresholds show the ability level at which the probability of achieving a particular score category is 0.50 or higher. For example, the threshold for category 1

of item A6 is 0.840, which means that the probability of achieving category 1 or higher is 0.50 or higher at an ability level of 0.840 or higher. In Table 2, the threshold refers to the probability level above which the model will predict a positive outcome (i.e., 1) for the target variable, and below which it will predict a negative outcome (i.e., 0). For example, if the threshold is set at 0.5, then any predicted probability greater than or equal to 0.5 will result in a positive prediction, and any predicted probability less than 0.5 will result in a negative prediction. In the context of Table 2, it appears that the model has been evaluated at different threshold levels (ranging from 0.1 to 0.9) to assess the impact on its performance measures (such as accuracy, sensitivity, and specificity). This helps to identify the optimal threshold level that maximizes the model's overall predictive power.

Generally, the choice of threshold depends on the specific needs of the problem at hand, and may involve balancing the trade-offs between different performance measures. For example, a higher threshold may result in fewer false positives (i.e., cases where the model predicts a positive outcome when it should be negative), but at the expense of increased false negatives (i.e., cases where the model predicts a negative outcome when it should be positive). The threshold values are well-spaced and the measures cover a wide range of emotional distress levels, which suggests that the scale is sensitive to differences in emotional distress levels among respondents.

**Figure 2: Wright Map of DASS-21**



**Research Question Four:** What is the reliability of the DASS-21?

**Table 3: Reliability of the DASS-21**

	Person Reliability	Item Reliability
DASS-21	0.806	0.9315

Table 3 reports the model fit statistics for the Rasch model used in this study. The Person Reliability value is 0.806 and the item reliability value is 0.9315 which indicates that the Rasch model was able to reliably measure the latent trait of interest (in this case, psychological distress) in the sample of secondary school students in Nigeria. This value should be between

0.70 and 0.90 for the model to be considered acceptable.

**Discussion**

The results of this study offer significant new understandings of the DASS 21 scale's psychometric characteristics among secondary school pupils in Delta State, Nigeria. The Rasch model was employed to

examine the scale's dimensionality, item fit, category functionality, Wright person map, and reliability.

### **The Scale's Dimensions**

The DASS 21 scale is a unidimensional scale that assesses a scale using the Rasch model (Henry & Crawford, 2005; Lovibond & Lovibond, 1995). Good Fit All items on the DASS 21 scale fit the Rasch model well, according to item fit statistics, with infit and outfit mean square (MNSQ) values falling within the permissible range of 0.6 to 1.4, which is inline with previous studies (Thiyagarajan et al., 2022; Parkitny et al., 2012). This shows that the scale's components effectively measure psychological distress.

### **Category Operation**

According to the category functioning analysis, the four-point Likert scale with the majority of them falling within the moderate range of discomfort. This shows that the DASS 21 scale can distinguish between the individuals' various levels of psychological distress. This result is in line with Parkitny et al., (2012) study.

Reliabilities of the DASS-21 item and person have a good level of dependability. This suggests that the

single construct, namely the degree of psychological distress felt by the participants but with three factors, according to the findings of the Rasch analysis. This result is in line with other studies that examined the dimensionality of the DASS 21. The employed in DASS 21 scale functioned effectively and was able to distinguish between the participants' various levels of psychological distress. Nevertheless, the research also showed that certain of the answer categories, especially the extreme reaction categories, were underused. This implies that some participants could have found it challenging to use the response scale or might have been reluctant to support extreme replies. Wright Map of Person The Wright person map showed that participants were evenly distributed over the psychological distress continuum, levels of scale can distinguish accurately between the individuals' various psychological discomfort. The indexes of the reliabilities found in this study was similar to that of previous studies (Sarican, 2018; Parkitny et al., 2012). In all, the DASS-21 was found to be valid. This finding is in line with that of previous research (Thiyagarajan et al., 2022; Sarican, 2018; Tran et al., 2013).

Although the study's use of the Rasch model to examine the psychometric features of the DASS 21 scale among secondary school students in Delta State, Nigeria, sheds light on how to measure and assess mental health outcomes in this group, there are certain limitations that should be noted because the research sample was restricted to one state in Nigeria, it is possible that it is not typical of secondary school students in all of Nigeria. The findings' capacity to be generalized is thus constrained. Only self-report measures were utilized in the study, which makes them vulnerable to response biases such as social desirability bias.

The study failed to evaluate any confounding factors that can affect the results in terms of mental health, such as socioeconomic status or academic success. Future research might take these elements into account to better comprehend the intricate interactions between mental health and other issues. Only one kind of statistical analysis—Rasch modeling—was utilized in the study to look at the psychometric characteristics of the DASS 21 scale. While Rasch modeling is a frequently used tool for examining measurement characteristics, other statistical methods like the 2-parameter and 3-parameter model of Item Response

Theory may offer more information about the accuracy and dependability of the scale.

### **Counselling Implications for Policy and Emotional Counselling**

1. The DASS-21 Scale's validation can aid teachers in better comprehending the emotional and mental health requirements of their students. Educators can identify children at risk of experiencing emotional or mental health issues using the DASS Scale and offer them the necessary tools and help.
2. The DASS-21 Scale's validation can assist administrators in delegating resources to meet the mental health needs of students. It may also guide the creation of regulations and initiatives to enhance students' psychological and emotional health.
3. Measurement and assessment specialists may be able to better understand the psychometric characteristics of the DASS-21 Scale through factor analysis in its validation. The instrument may be improved using this data to ensure it accurately and



consistently measures secondary school students' emotional and mental health.

4. The DASS-21 Scale can be used by school counsellors to identify students who are at risk of experiencing emotional or mental health issues. With this knowledge, tailored treatments and support may be given to delaying the beginning of mental health problems.
5. The findings of the DASS-21 Scale can assist school counsellors in choosing the best interventions to meet the mental health needs of their pupils. The tool enables counsellors to customise their treatments by revealing the areas where a kid may be having difficulty.
6. Students undergoing interventions or therapy for emotional or mental health difficulties can have their progress tracked using the DASS-21 Scale. Counsellors can monitor students' mental health changes and modify their treatments using routine instrument administration.
7. The DASS-21 Scale may be used to assess the success of mental health initiatives in educational settings. School

counsellors can determine a program's efficacy and make necessary modifications by monitoring changes in students' mental health conditions before and after program implementation.

### **CONCLUSION**

This study assessed the psychometric qualities of the Depression Anxiety Stress Scales (DASS-21) among secondary school students in Delta State, Nigeria, using the Rasch model. The results showed that the DASS-21 is a unidimensional scale that assesses a single construct, psychological distress, with good fit to the Rasch model. The item difficulty levels were appropriate for the target population, and the scale was sensitive to differences in emotional distress levels among respondents.

### **RECOMMENDATIONS**

The study's findings have important implications for school counselors and teachers, who can use the DASS21 Scale to identify and support students at risk of experiencing emotional or mental health issues. The tool also enables counselors to customize their treatments to address areas where a student may be struggling, monitor progress, and evaluate the effectiveness of mental

health initiatives in educational settings. Overall, the study contributes to the body of knowledge on the psychometric characteristics of the DASS-21 Scale and its applicability in identifying mental health problems in Nigerian secondary school students.

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