











discrimination. Like differentiation humor, there is also control/enforcement humor that also has negative impact given that no one likes to be controlled.

### **Humor in anxiety and sports performance**

Anxiety has been defined as personal feeling of tension, uneasiness, nervousness, and worry. It is also associated with an arousal of the autonomic nervous system (Spielberger, 1983). Anxiety is an emotion regarded as a feeling of tension, emotional state and physical changes (Chan 2000). Meanwhile, Rector (2008) is of the view that a certain amount of anxiety (normal and necessary) leads one to act on concerns and protects from harm and is essential for one's survival. Knorring (2005), anxiety is a normal feeling that one experience when confronted with danger, tense situation, stress, threat, or when uncomfortable. Anxiety could be individual state, a trait, or situation (Horwitz, 2017). It has been described by earlier researchers as unpleasant emotion and believes to require some degree of cognitive processing prior its experienced (Woodman & Hardy 2001, Zhang, Woodman, & Roberts, 2018;). According to Lévy-Valensi (1948) and Liebert and Morris (1967) anxiety is a distressing feeling that could be triggered by the combination of cognitive worrying and somatic symptoms in the form of tension, dizziness, heart palpitation, difficulty in breathing, or trembling. The cognitive and somatic anxiety could take place at either state level or as a trait. Individual one's traits anxiety depends largely on a number of factors including environmental threats which contribute largely on individual performance (Cheng, Hardy, & Markland, 2009). Anxiety has various symptoms therefore various treatments (Bradley, 2002). Bradley (2002) also identified anxiety types to include:

*First is Performance anxiety*, which is fear about one's ability to perform a specific task. It can occur with any given task, when feelings of intense fear and distress are overwhelming and prevent us from doing everyday things, an anxiety may be the cause.

*Second Panic*, which is associated with panic attack (unexpected feelings of terror) occasionally striking repeatedly and without warning. Often mistaken for a heart attack, a panic attack causes powerful, physical symptoms including chest pain, heart palpitations, dizziness, shortness of breath and stomach upset.

*Third is Phobias*: Most people with particular phobias have numerous causes. To avoid panicking, someone with specific phobias will work hard to avoid their triggers. Depending on the type and number of triggers, this fear and the attempt to control it can seem to take over a person's life.

*Forth is Generalized Anxiety Disorder (GAD).* GAD produces chronic, exaggerated worrying about everyday life. This can consume hours each day, making it hard to concentrate or finish routine daily tasks. A person with GAD may become tired by worry and experience headaches, tension or nausea.

*Fifth is Social Anxiety:* Unlike shyness, this causes intense fear, often driven by irrational worries about social humiliation “saying something stupid,” or “not knowing what to say.” Someone with social anxiety disorder may not participate in conversations, contribute to class discussions, or offer their ideas, and may become isolated. Panic attack symptoms are a common reaction.

### **Measures of anxiety in the context of sports performance**

Anxiety affects performance in sport (Horwitz, 2017). To assess one’s perceived anxiety especially how it affects performance be it sports, work, or other context, several researchers have made different propositions. One of such assessment tool is that developed by Smith, Smoll, and Schutz (1990) to measure anxiety in sports and was called the Sport Anxiety Scale (SAS). The instrument was developed to comprise three subcomponents to assess worry, concentration disruption as well as somatic anxiety. It was revised by Smith, Smoll, Cumming, and Grossbard (2006) given the inconsistency existing between child and adult anxiety; and the revise version created was labeled the SAS-2. Martens, Burton, Rivkin, and Simon (1980) also developed an instrument called Competitive State Anxiety Inventory (CSAI) comprising 27-items, this was further modified ten years later and labeled CSAI-2. The modified version identified three components that could be seen as separate units. The components include: somatic anxiety, cognitive anxiety, and self-confidence. The instrument was further modified in 2003 and labeled CSAI-2R to improve the factor structure (Cox, Martens, & Russell, 2003). The component of the questionnaires are structure in such a way that users may choose to administer a single-item version of the CSAI-2 (Hardy and Hutchinson, 2007) which requires lesser time companied with the entire instrument. In like manner, Barlow, Woodman, Gorgulu, and Voyzey, (2016); Woodman, Barlow, and Gorgulu, (2015); Woodman and Davis, (2008) also developed an instrument referred to as the Mental Readiness Form (MRF) comprising three single-item factors and meant to measure: tension/somatic anxiety; worry/cognitive anxiety; and self-confidence. The instrument is less intrusive and as a result, offers convenience. The choice of which instrument to use depend largely on the objective of the study and the anticipated outcome. When only CSAI-2 or CSAI-2R is adopted, then the intensity of anxiety symptoms will be assessed (Wagstaff, Neil, Mellalieu, & Hanton, 2012). However, other instruments also abound for measuring anxiety. These instruments could be adopted in assessing anxiety including self-made or non-standardized instruments. Sometimes, there are researchers who adapt these existing instruments and modify them to meet their objectives. Again, Cheng et al. (2009)

proposed the Three-Factor Anxiety Inventory (TFAI) which consists of cognitive anxiety, physiological anxiety, and the regulatory function of anxiety. There is some support for this perspective (Cheng, Hardy, and Woodman, 2011).

### **Empirical studies**

Several studies have been carried out to investigate the impact of humor on anxiety and performance. For instance, Tagalidou, Distlberger, Loderer and Anton-Rupert (2019) investigated the efficacy and feasibility of humor training for people suffering from depression, anxiety and adjustment disorders. The study was based on a diagnostic interview (SCID I and II) with about 37 people selected randomly as well as the use of questionnaire and a month follow-up training. A Pre- and Post-tests were carried out. The result indicated that after training, there was an improvement in humor-related outcomes for the period of study. The secondary outcomes however were not affected by the training. The study concluded that humor plays essential roles in controlling anxiety and improving performance.

Edwards and Jones (2016) investigated the impact of 'humor in sports coaching. The primary purpose of the paper was to investigate the use and manifestation of humor within sports coaching. Data was gathered from a ten-month ethnographic study that tracked the athletes and coaches of Senghenydd City Football Club (a pseudonym) over the course of a full season. Data was collected by means of participant observation and ethnographic film. The result of the study showed that both 'inclusionary putdowns' and 'disciplinallumour' particularly, are all in relation to how they contribute to the production and maintenance of the social order. Finally, a reflective conclusion discussed the temporal nature of the collective understanding which was evident amongst the group at Senghenydd, and its effect on the humor.

### **Methodology**

The study used an experimental research design. Experimental research collects data needed to help researchers make better decisions. The research was meant to determine the cause, effect relationship in determining the impact of humor on anxiety and sports performance in Secondary schools in Nigeria. It can be represented by a set of symbols (Campbell & Stanley, 1963, p. 13): Pretest (01); Treatment (X), and Post - test (02).

Lagos state has a population 799 public secondary schools spread over six Educational Districts. It has a total of 254,771 students in the schools. For this study, one educational district was randomly chosen (Educational District IV) and it has 305 public schools and 254,771 students. A purposive random sampling technique was used to select six schools from Educational District IV and 420



students with 70 systematically selected from each of the schools to compose the respondents for the study.

#### Data collection tools

For the study self-made questionnaire was developed, and used. This instrument had two sections A and B. Section A generated data on age and gender of the respondents. Section B had a Likert scale structure to gather data on the analytical questions particularly measuring the levels of anxiety secondary school students in the study area have in basketball. These levels consisting of worried, concentration disruption, and somatic traits were measured in a four option Likert scale of - Not at all (NA), Somewhat (SW), moderately so (MS), and Very moderately so (VMS) with each of them weighted 4, 3, 2, and 1 respectively for analysis.

The instrument was validated and tested for reliability before finally for administration by the researcher who visited using six research assistants for the work. These research assistants received requisite training for two days by the researcher before departure to the field. The copies of the instruments were administered in a sit and retrieve upon completion by the respondents. The data collected was analyzed by simple percentage and measures of centrality tendency particularly mean. The row and column mean for each of the Likert scale items were calculated as against the frequency percentage used for the demographic items.

The weight for the Likert scale questions had a row mean of 2.50 with the column mean varying with the number of items under each of the variables in section B (that is, worried with 7 questions, concentration disruption with 5, and somatic traits with 9 questions). ANOVA statistical tool using SPSS version 2016 was adopted to test the moderating effect of humour in the relationship between anxiety and sports performance.

#### Results and discussion

Of the 420 copies of questionnaires distributed, 411 were retrieved, giving a 97.9% retrieval rate on which, the analysis is done. The results are as presented below.

Table 1:

#### Respondents' Age Classified by their Age and gender. (N=411)

Gender	Male	%	Female	%	Total frequency	%
Age						
Less than 10 years	8	02.0	12	2.9	13	04.9
10 but less than 15 years	133	32.3	140	34.1	273	66.4

15 but less than 20 years	45	11.00	49	11.9	94	22.9
20 years and above	12	02.9	12	2.9	24	05.8
<b>Total</b>	<b>198</b>	<b>48.2</b>	<b>213</b>	<b>51.8</b>	<b>411</b>	<b>100</b>

**Source: Field survey, 2021**

Table 4.1 shows the respondents by ages and gender. 48.2% are males and 51.8% are females, while 4.9%, 66.4%, 22.9% and 5.8% were less than 10years, 10 but less than 15years, 15 years but less than 20years, and 20 years and above respectively. Majority are aged 10 but less than 15 years. This is the expected mean age group of secondary school students in Nigeria.

**RQ1: What are the levels of anxiety secondary school students have in basketball?**

**Table 2:  
The Level of Anxiety Secondary School Students have in Basketball (N=411)**

S/N	ITEM	NA	SW	MS	VMS	X *	Decision
<b>Worried</b>							
1.	I have self-doubts	50	61	100	200	2.44	Rejected
2.	I am concerned that I may not do as well in competitions as I could	7	41	173	181	3.29	Accepted
3.	Thoughts of doing poorly interfere with my concentration during	3	19	78	311	3.03	Accepted
4.	I'm concerned about choking under pressure	67	97	99	148	4.24	Accepted
5.	I'm concerned about performing poorly	44	45	99	223	3.22	Accepted
6.	I'm worried about reaching my goal	39	43	98	231	3.98	Accepted
7.	I'm concerned that others will be disappointed in my performance	17	19	97	278	2.71	Accepted
	<b>Mean</b>					3.27	Accepted
<b>Concentration Disruption</b>							
1.	During competition, I find myself thinking about unrelated things	34	22	327	1028	3.43	Accepted
2.	My mind wanders during sport competition	33	28	270	1096	3.47	Accepted
3.	While performing, I often do not pay attention to what's going on	45	36	357	196	3.29	Accepted
4.	I have lapses of concentration during competitions because of nervousness	58	14	261	1036	3.33	Accepted
5.	I'm concerned I won't be able to concentrate.	29	18	261	1038	3.46	Accepted
	<b>Mean</b>					3.40	Accepted
<b>Somatic Trait Anxiety</b>							
1.	I feel nervous	23	64	273	1060	3.45	Rejected
2.	My body feels tense	23	38	96	1348	3.66	Rejected
3.	I feel tense in my stomach	33	98	279	984	3.29	Rejected
4.	My heart races	7	66	264	1132	3.47	Rejected
5.	I feel my stomach sinking	68	176	291	792	3.13	Rejected

6.	I sometimes find myself trembling before or during a competitive event	47	88	267	904	3.23	Rejected
7.	My body feels tight	21	94	264	1020	3.40	Rejected
8.	My stomach gets upset before or during a competitive event	54	142	327	744	3.14	Rejected
9.	My heart pounds before completion	33	108	330	856	3.23	Rejected
<b>**Item mean = 2.1</b>							
<b>*Row mean = 2.5</b>							
<b>*** Grand mean = 3.34</b>							

**Source: Field survey 2021**

Table 2 shows the respondents by level of anxiety in basketball. Almost all the items under “worry” are accepted except one. so, worry cause anxiety in students with regards to basketball just as reflected by the mean scores for concentration disruption and somatic traits. The row mean for majority exceed the mean of 2.50. Item one under worried has a lower mean of 2.44 which turns up a decision of rejected.

**RQ2: What is the moderating effect of humour in the relationship between anxiety and student’s performance in sports in secondary school students in Lagos State.**

ANOVA tool using SPSS version was adopted to test the moderating effect of humor in the relationship between anxiety and sport performance. The model summary table provides results on the changes statistics meant to account for the statistical significance of the relationship; in this case, the  $R^2$  change is 0.062 (6.2%) which indicates that the addition of interaction term will yield a 6.2% increase in the variation. The relation shows that the probability value is 0.000; that is  $P < 0.05$  as indicated in the sig. F. Change. As a result, the null hypothesis is rejected. This leads to the conclusion that humour does have a moderating effect in the relationship between anxiety and performance.

The overall objective of this study was to investigate the moderating effect of humor in the relationship between anxiety and sports performance in secondary schools in Lagos State. The first research questions investigated the level of anxiety that secondary school students have in sports performance, with reference to basketball. Three dimensions of anxiety including ‘Worried’, ‘Concentration disruption’ and “Somatic trait anxiety” were identified. Based on the outcome of this study, Majority of the respondents indicated very high level of worry, concentration disruption and somatic trait anxiety as indicated by their high mean scores 3.27; 3.40 ; and 3.34), compared with those who do not exhibit anxiety (2.44). Based on this result, the study concluded that anxiety interferes with secondary school students’ sports performance. Depending on the level of anxiety, one may be led to protect himself from harm to ensure survival. Anxiety is also subject to personal trait or situation, but involves emotions which may be unpleasant and requires a significant level of cognitive processing prior to its experience (Zhang, Woodman, & Roberts, 2018). Certain factors

can be a trigger for anxiety such as environmental threats which eventually affect individual performance (Cheng, Hardy, & Markland, 2009). The result supports previous studies such as Kannian (2015), Muhammad *et al.*, (2017); Georgakaki and Karakasidou, (2017), Zhang, Woodman and Roberts (2018); Hasanah and Refanthira (2019).

The second research question investigated the moderating effect of humor in the relationship between anxiety and sports performance. The result from the analysis indicated that humor has positive and significant effect on the relationship between anxiety and sports performance. This shows that the increase in the moderating variable (humor) will lead to an increase in the level of sports performance reduces the value of anxiety. Supporting this finding is the Relief theory which opines that humor is a means of releasing tension and relieving anxiety. Thus, when pleasant sensation such as humour is experienced, anxiety is dissipated and overall performance tends to improve (Martin & Ford, 2018). As the theory pointed out that anxiety could stem from fear of losing or anxiousness to win thus creating an uncomfortable situation. This theory therefore supports the finding of the study on the positive significance of humour in relieving tension among sports participants.

## **Conclusions**

The study is set to find out the effects of anxiety on secondary school students and sports performance and the moderating effect of humour, which therefore concludes that humor plays significant roles in dissipating anxiety and enhancing overall students' performance in sports. The result from both studies supported some existing literature that found humor as essential in calming tension and anxiety. Drawing inference from the result of this study, the study concluded that humor has significant mediating role to play, especially in dissipating anxiety that is usually triggered by competition, fear of failure, anxiousness to win, too many expectations from fans and clients, and somatic traits among others. With humor, the athletes' tensions are eased which in return improves their overall performance in sports, especially in secondary school. This is important because at secondary school level, individual students began making serious decisions on their future careers. Giving them the right training and coaching will enable them overcome their fears and anxiety for better performance.

## **Recommendations**

Based on the aforementioned findings of this study and the conclusion drawn, the study makes the following recommendations:

- Students should be informed on the extent to which anxiety can affect their performance and encourage them to take precautions that will calm their nerves prior to sports activities. \
- Also, Coaches/teachers should recognize the role of humor in dissipating anxiety and thus invest on inviting psychologists or praise singers who could help in ensuring that the atmosphere for sports is calm and relaxing.

- Athletes should be given pep talks prior to each sporting activity and be encouraged to have fun playing instead of strict mandate to win the game.

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**Appendix**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.449 <sup>a</sup>	.202	.197	.8281	.202	45.439	2	360	.000	
2	.514 <sup>b</sup>	.264	.258	.7962	.062	30.438	1	359	.000	1.904

- a. Predictors: (Constant), humor, Anxiety
- b. Predictors: (Constant) Humor, anxiety
- c. Dependent Variable: Sport performance

**ANOVA**

**Sport Performance**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.627	2	8.313	10.230	.000
Within Groups	292.552	360	.813		
Total	309.179	362			

The means could be say to differ significantly as presented in the equation below:

$F = (2, 360) = 10.230, P < 0.000$ . We reject the null hypotheses since the result indicated a statistically significance relationship

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	Collinearity Statistics

		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	1.553	.314		4.941	.000	.935	2.171		
	Anxiety	.006	.069	.004	.081	.000	-.130	.141	.801	1.249
	Sport performance	.614	.072	.447	8.494	.000	.472	.756	.801	1.249
2	(Constant)	1.112	.313		3.556	.000	.497	1.727		
	Anxiety	-.474	.074	.345	6.417	.000	.329	.620	.707	1.414
	Humor	.280	.051	.275	5.517	.000	.180	.380	.824	1.213

a. Dependent Variable: Sport performance

Humor shows a positive coefficient ( $r=0.280$ ) while anxiety have negative coefficient ( $r=-0.474$ ). This shows that the increase in the moderating variable (humor) will lead to an increase in the level of sport performance but reduces the value of anxiety.

### Multiple Comparisons

Dependent Variable: Sport performance

Tukey HSD

(I) RQ3a	(J) RQ3a	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
3.0	4.0	-.5447*	.1453	.001	-.887	-.203
	5.0	-.6439*	.1436	.000	-.982	-.306
4.0	3.0	.5447*	.1453	.001	.203	.887
	5.0	-.0992*	.1024	.005	-.340	.142
5.0	3.0	.6439*	.1436	.000	.306	.982
	4.0	.0992*	.1024	.005	-.142	.340

\*The mean difference is significant at the 0.05 level.