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New Data on the Enugu Somatization Scale, Taking Frequency and Intensity of Somatic Experiences of Nigerians into Consideration

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Abstract

Background: The Enugu Somatization Scale (ESS) measures somatic complaints of psychological origin indicating psychiatric disturbance. The scale was originally designed to measure somatic complaints using a dichotomous Yes / No response. Through observation and feedback it was noted that some information about intensity and frequency might not be captured using Yes / No answer modus.

Aim: (1) To compare intensity and frequency of response as viable options for clinical assessment of somatic complaints. (2) To re-examine the Enugu Somatization Scale (ESS) items several years after its development. (3) To conduct factorial analysis to evaluate the factors within the scale.

Method: The ESS was rescaled to capture intensity and frequency. It was administered to a cross-section of 200 stressed normal purposively drawn from a student group in the Enugu metropolis.

Results: Both measurements; that is intensity and frequency correlated significantly at r = 0.54. Factor analysis of the data showed emergence of two factors. Most items loaded significantly on head and body factors. The internal consistency using frequency was 0.96 and using intensity 0.97. Males scored significantly higher than females both as a whole and in the subscales of Head and Body.

Conclusion: It is important to measure intensity and frequency of somatic complaints, especially given the need to operationalizing somatic complaints in a country where Western diagnostic classification systems might not be most suitable. This makes this study particularly important.

Keywords: Psycho-diagnosis; Factor analysis; Correlation; Intensity and frequency

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Introduction

Somatic complaints are common among physically and mentally ill patients in Nigeria [1]. It is often comorbid with depression, anxiety and brain fag [2, 3]. This had earlier raised the notion that somatic complaints maybe indicative of depression or anxiety [4]. Both recent and earlier studies that had tried to establish somatic complaints as a predictor of depression in Nigeria have proved inconclusive [5-7]. This was the earlier notion that led to the development of the Enugu Somatization Scale (ESS) [8]. The understanding was that there are unique somatic complaints among West Africans compared to the West include these unique somatic complaints such as: "heat in the head," "crawling sensation of worms and ants," "headache," "heaviness sensation in the head," "biting sensation all over the body," etc. [9]. These complaints were considered to be indicative of unbearable emotional distress which is communicated using the body (soma). Hence the ESS was specifically designed to measure culture specific somatic complaints of Nigerians.

Development of the Original Enugu Somatization Scale (ESS)

The theory behind the development of the Enugu Somatization Scale is that somatic complaints are idioms of distress [10]. Each somatic complaint is understood to have an underlying

communicative cultural content. This had been earlier noted by Ayorinde [11] and Morakinyo [12] in Nigeria. Ebigbo [8] developed the ESS through collecting direct patients complaints verbatim that is the way they said it to clinicians and they were used to form the ESS items. The response pattern they chose was a dicutomous yes / no response. The assumption was that anybody who has any similar somatic compliant will identify it and say yes or no accordingly. Over the years our clinical observation and feedback from patients / clients who have used the scale is that the yes or no response pattern might not represent the broad spectrum of their experience of somatic complaints.

Rescaling of the Instrument

Over the years our clinical observation and feedback from patients/clients who have used the scale is that the yes or no response pattern might not represent the broad spectrum of their experience of somatic complaints. Other contemporary issues in the field of mental health especially in the area of understanding somatization and the need to monitor treatment progress all have contributed to the rescaling of the ESS. The scale was restructured following these principles:

1. Somatization is known as an expression of unbearable emotional experience. How frequent and how intensive are the ways patients report somatic complaints.
2. There is need to understand if frequency and intensity of experience of somatic complaints correlate. This is particularly relevant to improve diagnosis and management of somatic complaints, especially as it relates to the current controversies surrounding the nosology of somatization using the contemporary Diagnostic systems such as the Diagnostic and Statistical Manual of Mental Disorders (DSM) V and the ICD 10.
3. The emphasis on using global standards for diagnosis of mental disturbances using classification manuals such as the DSM and the International Classification of Diseases (ICD) has become very significant. Despite that, efforts at determining ways of understanding culturally based symptoms of mental illness need to be encouraged.
4. Strengthening the psychometric properties of the ESS is important because commonly popular scales such as the Patient Health Questionnaire (PHQ -15 [13]) do not have some of the identified unique somatic complaints common in West Africa and Nigeria such as the worm and ant like crawling sensation, like heat in the head and other parts of the body etc. The Bodily Distress Syndrome [14] uses cut off score to identify if patients have somatic complaints significant enough for the clinicians attention. However the ESS considers each somatic complaint as a communication that needs to be decoded to understand the patient's underlying social and psychological problems. Even Somatoform Screening Scale (SOMS) 15 based on ICD and DSM do not satisfy this need to pay attention to the culture specific communication content of the somatic complaints.
5. It has become important to revaluate the somatic complaints that are in the ESS and measure if they are still relevant complaints several years after it was developed in 1982. Also it is important to factorize the scale to understand the other facets that may be in the scale. The scale was initially divided into head and body subscales based on clinical judgement. The head subscale was attributed to goal frustration and the body subscale was attributed to anxiety. It is therefore important to examine and learn more about the concept of somatization in Nigeria particularly because somatization has been difficult to operationalize in Nigeria using Western diagnostic system. To contribute on the discussion of understanding and treatment of somatic complaints this study set out to pilot test the use of frequency and intensity of experience. This was done through pilot testing of the frequency and intensity responses among stressed normal (a group of undergraduate students taking exams).

Objectives

1. To compare intensity and frequency of response as viable options for clinical assessment of somatic complaints.
2. To re-examine the Enugu Somatization Scale (ESS) items several years after its development.
3. To conduct factorial analysis to evaluate the factors within the scale.

Method

Participants

S/N	Gender	Marital status	Age	Age information
1.	Females 54.5%, n = 109	Married (93%, n = 185)	14-17 year old (4.5%, n = 9) 18-25 year old (72.5%, n = 145) 26 year old & above (22.5%, n = 45)	Age range: 14 – 65 Mean age: 23.52 SD: 6.5
2.	Males 45.5%, n = 91	Single (7%, n = 15)		

Procedure

Purposive sampling of students preparing for sessional exams (stressed normal) in the Institute of Management and Technology Enugu was done. Willing (informed consent) students were randomly selected during exam period (odd and even numbers were distributed only even numbers participated). All bona-fide students (with identity cards), willing to participate and who had completely filled the forms were used for the final analysis. A total of 250 questionnaires were distributed, 200 forms were completely filled and were used for the final analysis.

Design

A cross sectional design was adopted for the data collection.

Instrument

Scale description

The scale was developed in 1982 by Ebigbo to measure somatic

complaints. It consists of 65 items 1-23 on the head section and 24-65 on the body section. The response modus is in a Likert response format to measure somatic complaints' frequency and intensity, for example (a) I have constant heat in the head almost never / no, (1) occasionally, (2) sometimes (3), always (4). (b) I have severe and constant headache almost unbearable (4) Intensive (3) Mild (2) Very mild / not at all (1).

The instruction is that those who either feel they do not have the complaint or those who have it a bit, all are required to score on the item almost never / no. This is designed to capture those who have the feeling very slightly or rarely and who would have in a Yes / No answer might have scored No. This is the major difference between the initial ESS of 1982 and the currently being rescaled ESS.

Scoring and interpretation

The scoring of the scale is done by summing up the responses of each participant and comparing it to the average score of all other participants. This shows if the participant has a score higher than the average person and this will indicate presence of psychological distress. Each individual symptom is believed to be communicating a certain kind of life problem that may be perceived as distressing. For example feeling of lump in the throat is believed to be an indication of someone who is in a condition where the client is unable to express feelings as it relates to something important in the life of the client but may be hindered by respect because of age difference which is highly rated culturally (mostly for younger persons) [8]. The purpose of the ESS is to determine whether through high frequency or intensity score (e.g. if a person scores two standard deviations above the average score) a person has become clinically interesting. Each compliant has a coded social and psychological problem which needs to be decoded for correctly targeted interventions.

The scale has two subscales Head and Body. The Head subscales were traditionally items that relate to somatic complaints referring to the head and the body subscales are somatic complaints that refer to the body. The head is clinical judged to relate to goal frustration and the body to anxiety. These subscales were retained in this rescaling but were subjected to factor analysis to identify items that would group under this subscale and those not.

Statistical analysis

The scores obtained from the participants answers to the 65-items on the scale on frequency and intensity response modi were statistically analyzed using Statistical Package for Social Sciences (SPSS) Version 17. Principal Component Analysis; Rotation method, Varimax with Kaiser Pearson moment correlation: coefficient, Cronbach Alpha, Mean and Independent T-test

In determining the factor scores, the unit weighing procedure was adopted because it tends to be highly correlated with each other and in terms of internal consistency it is the most internally consistent. According to Ferguson 1970 as cited in Morah [16] for all forms of correlation, a coefficient of 0.30 is assumed to be high enough for acceptance. Meredith [17] also noted that it is easy to explain factors with more than four items loading on it. Consequently in this study 0.30 was adopted as the cut-off, for the factor loadings and clustering of more than four items was considered a factor. Both the intensity and frequency answer modi were used for factor analysis.

Results

The response of the two hundred (200) participants, on the frequency and intensity answer modi were subjected to factor analysis for construct validity, Pearson Moment Correlation to correlate both response modi, and Cronbach Alpha for internal consistency as a measure of reliability.

Using frequency response modus two factors emerged. Factor 1 has been labelled the head subscale. This represents items in head section of the scale which have been identified clinically to indicate goal frustration **(Table 1)**. It has a total of 33 items loading on it 20 were from the initial 23 of the original Head subscale and 13 from the Body subscale). Factor 2 was labelled the body subscale. It indicates anxiety and has 30 items 27 are from the 42 original items that formed the initial body subscale and 3 from the head subscale. Items 54 and 55 did not load significantly on both factors and were expunged from the scale. Currently there are only 63 items in the ESS.

Cronbach's Alpha coefficients obtained for frequency and intensity answer modi are: 0.96 and 0.97 respectively for the 65-items of the ESS **(Table 2)**. . Pearson correlation shows that frequency and intensity of somatic complaints on the head subscale correlated at 0.54, while the somatic complaint of frequency and intensity of somatic complaints on the body correlated at 0.52. Head intensity and body frequency of the two subscales correlated moderately at 0.42, while head intensity and body frequency correlated also moderately at 0.48. Head frequency and body frequency correlated at 0.75, while head intensity and body intensity correlated at 0.81 **(Table 3)**.

Adolescents reported higher degrees of somatization in all dimensions of response (frequency and intensity) and in all domains of response (Head and Body), followed by young adults while older adults reported the lowest degrees of somatization: the younger the person the higher the somatization **(Table 4)**.

Gender differences in somatization was observed in frequency of somatization on the Body domain but less on Head domain, with males reporting higher somatization in each case than females. The t-test result shows that males reported significantly higher frequency of somatic complaints in all the domains. Both genders did not differ significantly in the report of intensity of somatization in any of the domains **(Tables 5 and 6)**.

Discussion

The result of factor analysis shows two factor loadings were found meaning that there were constellations or clusters of symptoms on the Enugu Somatization Scale. These factors were labelled head subscale indicating goal frustration and body subscale indicating anxiety on the body subscale. This is based on earlier studies whereby complaints on the head region were made by people who had predominantly goal frustration whereas, people who were in anxiety state reported more of the body symptoms.

Table 1 Showing factor analysis using the frequency response modus (rotated component matrix).

S/N	Item serial number	Head factor	Factor loading
1.	H 1	I experience heat sensation in my head.	0.55
2.	H 2	I have the feeling of something like water in my brain.	0.34
3.	H 3	It seems as if pepper were put into my head.	0.53
4.	H 5	I am convinced some type of worms is in my head.	0.36
5.	H 6	If you look on my head exactly you can see it is sort of breathing.	0.42
6.	H 7	Some spot / spots in my head are so painful that I believe there is an injury or sore inside my brain.	0.37
7.	H 8	My head seems to be bursting so that I have to hold my head to prevent it	0.45
8.	H 9	I am convinced my head expands and contracts.	0.55
9.	H 10	My head is so heavy that I feel I am carrying a heavy load.	0.42
10.	H 11	I have very severe headache.	0.47
11.	H 12	By mere touching parts of my brain it hurts.	0.45
12.	H 13	To be able to remain healthy, I must shave my hair completely and constantly.	0.36
13.	H 14	My eyes are painful.	0.51
14.	H 15	I can no longer see properly.	0.49
15.	H 16	My eyelids are so heavy.	0.50
16.	H 17	I have heat sensation in my eyes.	0.53
17.	H 18	There are some hairs that seem to have entered my ear and blow some air constantly or make some constant noise.	0.53
18.	H 19	I have been feeling very dizzy.	0.52
19.	H 20	I have needle like pinching in my head.	0.49
20.	H 23	When I swallow something, I can feel it travel very slowly down my throat to the stomach.	0.52
21.	B 27	I feel hot internally on all parts of my body.	0.45
22.	B 29	Sometimes I have difficulty in breathing.	0.43
23.	B 32	Clearly parts of my body are out of order	0.54
24.	B 37	My heart suddenly wants to fly out (obi-ilo-mmiri).	0.45
25.	B 39	I have biting sensation all over my body.	0.53
26.	B 44	I feel the various parts of my body shiver.	0.45
27.	B 47	My problem is that I cannot sleep.	0.42
28.	B 48	I feel general weakness on all parts of my body.	0.44
29.	B 50	I have continuous noise in my belly.	0.51
30.	B 51	My body is very light.	0.48
31.	B 57	One part of my body is occasionally lamed.	0.30
32.	B 60	I feel some minor cramps (Tita Ngweli).	0.44
33.	B 61	I feel that I have dried up.	0.45
S/N	**Item serial number**	**Body factor**	**Factor loading**
1.	H 4	Things like ants keep on creeping in various parts of my brain.	0.54
2.	H 21	The beating in my head is like that from a hammer.	0.47
3.	H 22	I have a feeling that something is blocking my throat.	0.56
4.	B 24	My shoulder is as heavy as if I were carrying a heavy load.	0.56
5.	B 25	I have the feeling as if a 6 inch nail got stuck in my back.	0.69
6.	B 26	I feel that there is some sore / injury on my chest, especially the left part of my chest.	0.49
7.	B 28	I feel hot internally only on selected parts of my body.	0.60
8.	B 30	I breathe in such little air that I sometimes fear I would suffocate.	0.63
9.	B 31	Intermittently I must breathe in fast otherwise I would be gone.	0.67
10.	B 33	I know my body is not alright but nobody seems to believe me.	0.59
11.	B 34	This disorder appears to be the reach of medical doctors.	0.81
12.	B 35	I am convinced that only the traditional healers can do the job on me.	0.81
13.	B 36	Such trouble as I have cannot easily be discovered by medical test.	0.71
14.	B 38	You can hear the beating of my heart from a distance.	0.79
15	B 40	I feel pain right inside the marrow of the bones of my hands and legs.	0.61
16.	B 41	I sweat profusely without having done adequate physical exercise.	0.51
17	B 42	Something like worn live in my body crawling at times to different parts of my body.	0.44
18.	B 43	The things that worries me is not steady, it comes to different parts of the body at will.	0.45
19.	B 45	Sometimes I feel so restless that I fear I would not be able to control it and go mad.	0.45
20.	B 46	It is difficult for me to explain to the doctor what is wrong with my body.	0.61
21.	B 49	While walking my feet cannot stand firm on the ground.	0.70
22.	B 52	I have no erection at all in situation where I used to be sexually aroused.	0.62
23.	B 53	I experience itching sensation on different parts of my body.	0.54
24.	B 56	My whole body is just dead: that is the feeling I have.	0.80
25.	B 58	I got goose skin without warning.	0.44

26.	B 59	My bodily symptoms worsen after sexual intercourse.	0.70
27.	B 62	I feel pain each time I engage in sexual intercourse	0.635
28.	B 63	The middle of sole of my feet is one of my main problems; I must continue to stretch my feet to get it somehow alright at times.	0.727
29.	B 64	Whenever the sun is shining, I cannot walk far on foot, otherwise I am sure to collapse.	0.454
30.	B 65	I feel a very heavy weight pressing me down whenever I sleep.	0.568

Table 2 Internal consistency reliability statistics for frequency and intensity.

S/N	Response modi	Cronbach's alpha coefficient
1.	Reliability Statistics on Frequency	0.961
2.	Reliability statistics Intensity	0.971

It shows about the Cronbach alpha coefficient for frequency and intensity answer modi of the ESS

Table 3 Pearson moment correlation of intensity and frequency response options on head and body sections of the ESS.

		1	2	3	4	5	6
1	Total_Somatisation_ frequency						
2	Total_Somatisation_ intensity	0.545					
3	Head_frequency	0 .883	0.483				
4	Head_intensity	0 .528	0.917	0.540			
5	Body_frequency	0.972	0.528	0.748	0.477		
6	Body_intensity	0.517	0.977	0.420	0.811	0.521	

There was a moderate and significant positive correlation between total frequency and intensity response ($r = 0.55$. $p < 0.001$) as well as on both the basis of frequency and intensity of symptoms for the Head ($r = 0.54$, $p < 0.001$) and Body ($r = 0.52$, $p < 0.001$) domains. There was however higher correlation between Head and Body domains on the same mode of response: frequency ($r = 0.75$, $p < 0.001$) and intensity ($r = 0.81$, $p < 0.001$)

Table 4 Age groups' mean scores.

Sub scale	Age_Level	Mean	Std. Deviation
Head_ frequency	Adolescents (14-17 year old)	83	8.6
	Young Adults (18-25 year old)	76	10.63
	Older Adults (26 year old & above)	73	11.32
Head_intensity	Adolescents (14-17 year old)	78	9.94
	Young Adults (18-25 year old)	71	10.05
	Older Adults (26 year old & above)	69	8.56
Body_ frequency	Adolescents (14-17 year old)	152	15.03
	Young Adults (18-25 year old)	138	20.76
	Older Adults (26 year old & above)	133	24.15
Body_intensity	Adolescents (14-17 year old)	141	21.25
	Young Adults (18-25 year old)	129	17.91
	Older Adults (26 year old & above)	124	17.92
Total_ Somatisation_ frequency	Adolescents (14-17 year old)	235	
	Young Adults (18-25 year old)	213	
	Older Adults (26 year old & above)	205	

Adolescents reported higher degrees of somatisation in all dimensions of response (frequency and intensity) and in all domains of response (Head, Body, Total somatisation), followed by young adults while older adults reported the lowest degrees of somatisation: the younger the person the higher the somatisation

This informed the initial labelling of complaints around the head as goal frustration and complaints around the body as anxiety [8, 16, 17]. This labelling of head and body was originally based on clinical observation is now confirmed by statistical analysis. This means that the thing troubling the individual could either be located on the head region or on the body region since Africans use either the head or the body to communicate in illness and in health for example "My head is too heavy that I feel I am carrying a heavy load" which is a metaphoric statement of being "weighed down" by too many responsibilities [18] "I know my body is not alright but nobody seems to believe me". This can be interpreted as a sense of distress that is yet to emerge in a definitive symptomatic form [18]. Since the Enugu Somatization Scale has high factorial loading on two factors it should be noted that Enugu Somatization Scale is a two-dimensional instrument which measures somatic symptoms on the head and on the body Ebigbo [8] **(Table 1).**

In addition, the authors observed that using intensity and frequency the items loaded in two factors that represent the head and body. This means that somatic symptoms present on the head could also be found on the body and vice-versa. The problem behind the items common to both head and body could be discovered if the individual is further interviewed. People who score high on the intensity response mode may be in need of urgent attention.

The results of the correlation also show that frequency of somatic symptoms on the head also pulls along with the frequency of items of somatic complaints on the body in a significant way at $r = 0.75$ **(Table 3)**. The intensity of items of somatic complaints on the head increases or reduces in the same proportion with those on the body evidenced by the significant interaction between intensity of items of somatic complaints on the head and intensity of items of somatic complaints on the body at $r = 81$ **(Table 3)**. This reaffirms the Igbo proverb (Eastern Nigeria) that "what happened to the eyes equally happened to the nose." It was observed also that frequency of items of somatic symptoms on the head also indicates the intensity of such symptoms on the head as well. This implies that the number of symptoms one has, determines how intensive the symptoms are since both frequency and intensity of items of somatic symptoms on the head have a correlation of 0.54 the same goes to the frequency and intensity of items of somatic symptoms on the body which has a correlation coefficient of 0.52 . This means that as the frequency of heat in the head increases, the intensity of the heat in the head may as well increase.

Interestingly, the result showed also that the frequency of items of somatic symptoms on the head moderately correlates with the intensity of items of somatic symptoms on the body at $r = 0.42$. Similarly the study indicates moderate correlation between the intensity of items of somatic complaints on the head and frequency of items of somatic complaints on the body ($r = 0.42$). This simply means that the frequency of somatic symptoms on the head and body subscales associates moderately with

Table 5 t-test for gender differences - equal variances across groups assumed.

Sub scale	t	df	Sig. (2 tailed)	Mean Difference	Std. Error Difference
Head_ frequency	-2.779	198	0.006	-4.19881	1.51106
Head_ Intensity	0.282	198	0.778	0.39540	1.40111
Body _Frequency	-2.875	198	0.004	-8.66811	3.01449
Body_ Intensity	-0.516	198	0.606	-1.34439	2.60566
Total_Somatization_frequency	-3.025	198	0.003	-12.86692	4.25298
Total _Somatization Intensity	-0.248	198	0.805	-0.94899	3.83224

Males reported significantly higher frequency of somatisation in all the domains. Both genders however did not differ significantly in report of intensity of somatisation in any of the domains

Table 6 Enugu somatization scale.

AGE …… SEX…… OCCUPATION……
MARITAL STATUS …….. EDUCATIONAL STATUS ……
INSTRUCTION:
Please read each question carefully and tick the options that described your feelings. Endeavour to answer all the questions.
FREQUENCY INTENSITY

Almost never	**1**	**Very Mild**	**1**
Occasionally	**2**	**Mild**	**2**
Sometimes	**3**	**Intensive**	**3**
Always	**4**	**Almost unbearable**	**4**

S/N		Almost Never	Occasionally	Sometimes	Always	Very Mild	Mild	Intensive	Almost Unbearable
1.	I experience heat sensation in my head. If yes how often								
	If yes how intensive do you experience it?								
2.	I have the feeling of something like water in my brain. If yes how often								
	If yes how intensive do you experience it?								
3.	It seems as if pepper were put into my head. If yes how often?								
	If yes how intensive do you experience it?								
4.	Things like ants keep on creeping in various parts of my brain. If yes how often								
	If yes how intensive do you experience it?								
5.	I am convinced some type of worms is in my head. If yes how often?								
	If yes how intensive do you experience it?								
6.	If you look on my head exactly you can see it is sort of breathing. If yes how often?								
	If yes how intensive do you experience it?								
7.	Some spot / spots in my head are so painful that I believe there is an injury or sore inside my brain. If yes how often?								

	If yes how intensive do you experience it?								
8.	My head seems to be bursting so that I have to hold my head to prevent it yes how often?								
	If yes how intensive do you experience it?								
9.	I am convinced my head expands and contracts. If yes how often?								
	If yes how intensive do you experience it?								
10.	My head is so heavy that I feel I am carrying a heavy load. If yes how often?								
	If yes how intensive do you experience it?								
11.	I have very severe headache. If yes how often?								
	If yes how intensive do you experience it?								
12.	By mere touching parts of my brain it hurts. If yes how often?								
	If yes how intensive do you experience it?								
13.	To be able to remain healthy, I must shave my hair completely and constantly. If yeas how often?								
	If yes how intensive do you experience it?								
14.	My eyes are painful. If yes how often								
	If yes how intensive do you experience it?								
15.	I can no longer see properly. If yes how often								
	If yes how intensive do you experience it								
16.	My eyelids are so heavy. If yes how often								
	If yes how intensive do you experience it?								
17.	I have heat sensation in my eyes. If yes how often								
	If yes how intensive do you experience it?								
18.	There are some hairs that seem to have entered my ear and blow some air constantly or make some constant noise. If yes how often?								
	If yes how intensive do you experience it?								
19.	I have been feeling very dizzy. If yes how often?								
	If yes how intensive do you experience it?								
20.	I have needle like pinching in my head. If yes how often?								

	If yes how intensive do you experience it?								
21.	The beating in my head is like that from a hammer. If yes how often?								
	If yes how intensive do you experience it?								
22.	I have a feeling that something is blocking my throat. If yes how often?								
	If yes how intensive do you experience it?								
23.	When I swallow something, I can feel it travel very slowly down my throat to the stomach. If yes how often?								
	If yes how intensive do you experience it?								
24.	My shoulder is as heavy as if I were carrying a heavy load. If how often?								
	If yes how intensive do you experience it?								
25.	I have the feeling as if a 6 inch nail got stuck in my back. If yes how often?								
	If yes how intensive do you experience it?								
26.	I feel that there is some sore / injury on my chest, especially the left part of my chest. If yes how often?								
	If yes how intensive do you experience it?								
27.	I feel hot internally on all parts of my body. If yes how often?								
	If yes how intensive do you experience it?								
28.	I feel hot internally only on selected parts of my body. If yes how often?								
	If yes how intensive do you experience it?								
29.	Sometimes I have difficulty in breathing. If yes how often?								
	If yes how intensive do you experience it?								
S/N		**Always**	**Sometimes**	**Occasionally**	**Almost Never**	**Mild**	**Very Mild**	**Intensive**	**Almost unbearable**
30.	I breathe in such little air that I sometimes fear I would suffocate. If yes how often?								
	If yes how intensive do you experience it?								
31.	Intermittently I must breathe in fast otherwise I would be gone								
	If yes how intensive do you experience it?								
32.	Clearly parts of my body are out of order. If yes how often?								

	If yes how intensive do you experience it?								
33.	I know my body is not alright but nobody seems to believe me. If yes how often?								
	If yes how intensive do you experience it?								
34.	This disorder appears to be the reach of medical doctors. If yes how often?								
	If yes how intensive do you experience it?								
35.	I am convinced that only the traditional healers can do the job on me. If yes how often?								
	If yes how intensive do you experience it?								
36.	Such trouble as I have cannot easily be discovered by medical test. If yes how often?								
	If yes how intensive do you experience it?								
37.	My heart suddenly wants to fly out (obi-ilo-mmiri). If yes how often?								
	If yes how intensive do you experience it?								
38.	You can hear the beating of my heart from a distance. If yes how often?								
	If yes how intensive do you experience it?								
39.	I have biting sensation all over my body. If yes how often?								
	If yes how intensive do you experience it?								
40.	I feel pain right inside the marrow of the bones of my hands and legs. If yes how often?								
	If yes how intensive do you experience it?								
41.	I sweat profusely without having done adequate physical exercise. If yes how often?								
	If yes how intensive do you experience it?								
42.	Something like worn live in my body crawling at times to different parts of my body. If yes how often?								
	If yes how intensive do you experience it?								
43.	The things that worries me is not steady, it comes to different parts of the body at will. If yes how often?								
	If yes how intensive do you experience it?								

44.	I feel the various parts of my body shiver. If yes how often?								
	If yes how intensive do you experience it?								
45.	Sometimes I feel so restless that I fear I would not be able to control it and go mad. If yes how often?								
	If yes how intensive do you experience it?								
46.	It is difficult for me to explain to the doctor what is wrong with my body. If yes how often?								
	If yes how intensive do you experience it?								
47.	My problem is that I cannot sleep. If yes how often?								
	If yes how intensive do you experience it?								
48.	I feel general weakness on all parts of my body. If yes how often?								
	If yes how intensive do you experience it?								
49.	While walking my feet cannot stand firm on the ground. If yes how often?								
	If yes how intensive do you experience it?								
50.	I have continuous noise in my belly. If yes how often?								
	If yes how intensive do you experience it								
51.	My body is very light. If yes how often?								
	If yes how intensive do you experience it								
52.	I have no erection at all in situation where I used to be sexually aroused. If yes how often?								
	If yes how intensive do you experience it								
53.	I experience itching sensation on different parts of my body. If yes how often?								
	If yes how intensive do you experience it								
54.	At the moment I get very weak erection. If yes how often?								
	If yes how intensive do you experience it								
55.	My whole body is all right. If yes how often?								
	If yes how intensive do you experience it?								
56.	My whole body is just dead: that is the feeling I have. If yes how often								

	If yes how intensive do you experience it								
57.	One part of my body is occasionally lamed. If yes how often?								
	If yes how intensive do you experience it								
58.	I got goose skin without warning. If yes how often?								
	If yes how intensive do you experience it								
59.	My bodily symptoms worsen after sexual intercourse. If yes how often?								
	If yes how intensive do you experience it								
60.	I feel some minor cramps (Tita Ngweli). If yes how often?								
	If yes how intensive do you experience it								
61,	I feel that I have dried up. If yes how often?								
	If yes how intensive do you experience it								
62.	I feel pain each time I engage in sexual intercourse. If yes how often?								
	If yes how intensive do you experience it								
63.	The middle of sole of my feet is one of my main problems; I must continue to stretch my feet to get it somehow alright at times.								
	If yes how intensive do you experience it								
64.	Whenever the sun is shining, I cannot walk far on foot, otherwise I am sure to collapse. If yes how often?								
	If yes how intensive do you experience it								
65.	I feel a very heavy weight pressing me down whenever I sleep. If yes how often?								
	If yes how intensive do you experience it								

the intensity of somatic symptoms. That one has all the items of somatic symptoms on the head for example indicate only moderate association with the intensity of those items of somatic symptoms on the body. The researchers emphasize that clinical observations could be empirically analysed and the result of factor analysis on the relationships between intensity and frequency of items of somatic complaints of the ESS confirmed this. Thus the frequency of items of somatic complaints of ESS could be used for screening purposes while its intensity is recommended for use for clinical purposes to monitor treatment success. Somatization is said to be a means of communicating psychic distress [19]. This view is also consistent with the findings of this study because males somatised more than females. In the African culture males are expected not to openly express psychic distress while females can. This may have influenced the high level of somatic complaint among males in this study because males may have higher level of unexpressed psychic distress than the females who may openly express psychic distress.

Adolescents had the highest scores in all dimensions of the ESS **(Table 4)** age specific average for each age group is provided in **(Table 4).** It is important to have scores for the various age groups because human development comes in stages. Each developmental stage has its own challenges various

developmental theories buttress this point. In other to key into this body of knowledge the participants were classified by age to show age specific norms in a later more comprehensive study to help in diagnosis. The age specific average for each age group is provided in **(Table 5)**.

The authors also recommend that this research on somatic complaints should not only focus at diagnosing somatization alone rather efforts at decoding the meanings of the somatic complaints should be made. This is a very promising way of breaking into the worry and discomforting circumstances within a short time and make treatment easy. While authors recommend continuous study in this regard, the average scores listed here are based on gender and age, they can be used as basis for future studies.

Conclusion

The Enugu Somatization Scale can be administered using the Likert style answer modus. Both measurements whether using frequency or intensity, correlate significantly. This makes measurement more sensitive and more differentiated. The intensity response modus can be used to measure decreasing intensity in the experience of somatic complaints. It is here also suggested that the frequency modus will show more sensitivity in screening for mental illness while intensity modus will show treatment progress. It is believed that with some careful interview the meaning of the somatic complaints will be found and treatment therefore made easy. This study sets the stage for a wider study.

Limitations

1. This study was based on student group alone.
2. The study used a relatively small sample and it is like a pilot study.
3. Its participants were Igbos of Nigeria. There are two other major ethinic groups (Hausa and Yoruba) and their pilot study should be undertaken as well.

Declaration of Interest

The authors have no interest.

Role of Each Author in this Work

The team lead and mentor for this work is Prof. Peter O Ebigbo. Team members Felix C Nweze, Chimezie L Elekwachi, John E Eze and Clara U. Innocent participated in Data collection, Ideas generation, writing of the paper and data analysis. However John E Eze was mainly responsible for the data analysis.

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