



ISSN: 2476-8642 (Print)

ISSN: 2536-6149 (Online)

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Indexed in: African Index Medicus, Crossref,  
Index Copernicus & Google Scholar

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# Annals of Health Research

## IN THIS ISSUE



- Beta Lactamase-Producing Bacteria
- Insulin Resistance
- Cardiac Diseases in Pregnancy
- Antibiotic Prescription
- Antenatal Care Services
- Epithelial Ovarian Tumours
- Low Back Pain
- Regional Anaesthesia in Children
- Somatisation
- Nigella sativa and Essential Tremor
- Neonatal Conjunctivitis
- Long Term Non-Progressive HIV Infection

**PUBLISHED BY THE MEDICAL  
AND DENTAL CONSULTANTS ASSOCIATION  
OF NIGERIA, OOUTH, SAGAMU, NIGERIA.**

## ORIGINAL RESEARCH

## Prevalence and detection of medically unexplained symptoms among out-patients in a Primary Health Care setting in South-west Nigeria

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### Abstract

**Background:** Medically unexplained symptoms are frequently encountered by physicians at the primary care level. The complexity lies in the ill-defined nature of the multiple physical symptoms and the similarity to several organic disorders.

**Objective:** To determine the prevalence of medically unexplained symptoms and relate this to physicians detection rate in a primary care setting in South-west, Nigeria.

**Methods:** The study was a cross-sectional, descriptive study of consecutive patients of the General Out-patient Department of Olabisi Onabanjo University Teaching Hospital, Sagamu, Ogun State. Interviews were conducted on 472 participants using a purposely designed socio-demographic questionnaire and the self-administered Patient Health Questionnaire -15 to screen for somatic symptoms.

**Results:** The ages of the participants ranged from 18 years to 90 years with the mean of 52.7±20.9 years. Out of the 472 participants, 225 (47.7%) met the criteria for medically unexplained symptoms using the Patient Health Questionnaire (PHQ). Across ages, medically unexplained symptoms were more often diagnosed among younger age groups especially those close to the age of 35 years (59.2%) [ $\chi^2 = 12.34$ ,  $p = 0.02$ ]. There were significant differences in the prevalence of somatisation across different levels of education [ $\chi^2 = 9.78$ ,  $p = 0.03$ ]. Physicians were able to diagnose psychological disorders in 12.4% of participants ( $n = 28$ ) with somatisation disorders.

**Conclusion:** There was a moderately high prevalence of medically unexplained symptoms in primary health care settings and physicians' detection rate of somatisation was also low. Physicians in primary health care should have a high index of suspicion for somatisation.

**Keywords:** Nigeria, Patient Health Questionnaire, Primary Health Care, Somatisation, Symptoms.

### Introduction

Medically unexplained symptoms are common mental health disorders that physicians at the primary health care level encounter. [1] These disorders are the persistent burden of bodily symptoms without medical

explanation or known pathology. They have been variously termed functional somatic syndromes, somatisation disorder, or somatic symptom disorder as stated in the latest version of DSM V. [2] The challenge for the physician at the primary health care level is not only in the management of the disorders

but in recognition of the symptoms. The complexity lies in the ill-defined nature of the multiple physical symptoms and the similarity to several organic disorders. The management of somatisation presents enormous challenges even to the most patient-physician. Patients with somatisation are frequent visitors to primary health care facilities, with unending complaints, poorly satisfied and spending a lot of money on care. [3, 4]

The perception of patients with medically unexplained symptoms by physicians is a critical factor in the approach to diagnosis and treatment. [5] Medically unexplained symptoms oscillate between physical and psychological disorders, hence it has been reported that physician with biomedical leaning tends to view somatisers differently compared to those with psychological leaning. [5] These differing orientations affect approaches to management and distorts uniformity of treatment and referrals.

In some surveys in western countries, researchers reported that at least a third to a quarter of attendees at the primary health care level are somatisers. [6] In Nigeria, there are no nationwide statistics on this issue. In a study of 234 patients attending a private clinic in Nigeria, 1.1% of the patients met the criteria for somatisation disorders. [7] Generally, as reported in a cross-cultural study, medically unexplained symptoms are quite a common disorder in primary health care settings. [4]

Patients with medically unexplained symptoms are of interest, especially to the primary health care physicians, due to the high usage of such facilities and associated disabilities. [5, 6] The dearth of widespread surveys in varied primary care settings in Nigeria, have limited symptoms detection and assessment of the accuracy of the diagnosis due to poor awareness and low index of suspicion by physicians at this level of practice. Often, these patients rarely get an appropriate referral to mental health

practitioners. Few studies in Nigeria have sought to explore the challenge encountered by physicians in primary care settings. This study aimed to determine the prevalence of medically unexplained symptoms and relate this to physicians detection rate in a primary care setting in South-west, Nigeria.

## Methods

### *Setting*

The study was conducted at the General Out-patient Department (GOPD) of Olabisi Onabanjo University Teaching Hospital, Sagamu, Ogun State. The General Out-patient Department of the hospital doubles as both the primary health care centre and tertiary health care referral centre. Referrals from various health care facilities are also received in this unit which is manned by resident doctors in family medicine supervised by two consultants. It caters for the health needs of the Sagamu community and environs. The unit addresses multiple common complaints from patients and also serves as a sorting centre for referrals to further specialised care within the hospital.

### *Participants*

The study participants were recruited from consecutive patients who presented at the GOPD for various ailments. Patients with psychosis, mental retardation and severe cognitive deficits were excluded from the study using the initial assessment that is based on history and mental state examination by resident doctors. Informed consent was obtained voluntarily. The study protocol was always reviewed with the consenting participants by three field workers (resident doctors) who were adequately trained in the use of the diagnostic instrument before they filled out the study instruments. The study instrument was interpreted in Pidgin English for those who were limited in reading the English language. In all, four hundred and seventy-two participants were recruited. The

study protocol was approved by the Health Research Ethics Committee of the Olabisi Onabanjo University Teaching Hospital, Sagamu (NHREC/28/11/2017).

### *Study Instrument*

The PHQ-15 is a self-administered somatic symptoms sub-scale, derived from the full Patient-Health-Questionnaire. [8,9] Relatively brief, it screens for 15 somatic symptoms that account for more than 90% of the physical complaints reported at the out-patient setting (exclusive of self-limited upper respiratory symptoms). [10]

The PHQ-15 is a valid measure, which has been used in 40 studies so far in different health care settings. [11]. The PHQ tool has been used in several studies in Nigeria. [11, 12] The participants rated the items on the PHQ-15 as 0 ("not bothered at all") to 1 ("bothered a little") or 2 ("bothered a lot"). A diagnosis of somatisation was made if at least 3 of the 15 items bother the patient a lot.

### *Data collection*

The instrument was filled by participants who consented to the study. The participants were given the questionnaires after being attended to by the physician. This was done in order not to create bias in their responses and complaints to the physicians. The diagnosis made by the attending physician was noted on the questionnaire by checking through the case notes. All the questionnaires and study instruments filled were scrutinized to clarify and correct errors. The PHQ algorithm was used to ascertain diagnosis based on the responses.

### *Data Analysis*

The data were entered into the SPSS version 16 for statistical analysis. Socio-demographic characteristics were computed and presented in percentages, means and standard deviation. Chi-Square test was used for cross-tabulations

of presence or absence of somatisation disorder against the proportions of variables such as gender, and employment status.

## Results

### *Socio-demographic characteristics of participants*

A total of 472 participants were recruited for the study. Their ages ranged from 18 years to 90 years. The mean age was  $52.7 \pm 20.9$  years. The highest proportion (41.7%) of the participants were aged 65 years and above. More than half (58.1%) were females and more than a third (163; 34.5%) had up to secondary education. The majority were employed (415; 87.5%), as seen in Table I.

### *Somatisation disorder*

Out of the 472 participants, 225 (47.7%) met the criteria for somatisation disorder using the Patient Health Questionnaire (PHQ)

### *Somatisation and socio-demographic parameters (Table II)*

There was a significant relationship across socio-demographic parameters and somatisation disorders. Across ages, somatisation disorder was more frequently diagnosed among the younger age groups especially those close to the age of 35 years (59.2%) ( $\chi^2 = 12.34$ ,  $p = 0.02$ ). There were significant differences across different levels of education ( $\chi^2 = 9.78$ ,  $p = 0.03$ ). Those who were employed had a higher rate of somatisation disorder than those who were unemployed ( $\chi^2 = 16.06$ ,  $p = 0.000$ ).

### *Physician diagnosis of somatisation (Table III)*

The attending physicians diagnosed psychological disorders among 12.4% of the participants ( $n = 28$ ) with somatisation disorders. The most common diagnoses were infections and infestations (71/225; 31.6%) and cardiovascular diseases (67/225; 29.8%).

**Table I: Socio-demographics of the participants**

<i>Parameters</i>	<i>Frequency</i>	<i>Percentage</i>
Ages (Years)		
≤35	130	27.5
35-64	145	30.7
≥65	197	41.7
Sex		
Male	198	41.9
Female	274	58.1
Marital status		
Never married	91	19.3
Married	376	79.7
Separated	5	1.0
Employment status		
Employed	415	87.9
Unemployed	57	12.1
Levels of education		
None	64	13.6
Primary	149	31.6
Secondary	163	34.5
Tertiary	96	20.3

## Discussion

The findings in the present study show that patients with medically unexplained symptoms or somatisation disorders form a significant bulk (47.7%) of the diagnoses among patients at the primary health care level. Comparatively, in a study among patients attending primary care centres in the Netherlands, and using the PHQ-15, patients with somatoform disorders made up of 30% of the studied population. [13]

The findings in the study differ from the estimates recorded in extensive multi-cultural studies in 14 countries, [14] which reported a lower prevalence (2.4% to 3.2%) while some western countries reported 17.3%, [14] which was still within the range of findings in previous studies. [15] These differences may be due to the strict criteria and diagnostic instruments on which the diagnoses were based, hence our findings aligned more with the range of somatisation index based on less restrictive criteria. (18.7 to 20.8%). [4].

It was observed in the present study that only age and employment status were the socio-demographic characteristics associated with somatisation disorders. It was significantly more common in those within the age bracket less than 35 years, similar to the findings from another part of south-west Nigeria. [16] Additionally, changes in symptomatology can occur over time. These changing patterns may affect the reported prevalence in the present study. Importantly, sex differences were not apparent and this complements the findings in some previous studies. [4] However, the findings in our study suggested that those who were more educated and were employed reported more complaints. This may indicate the tendency to turn to orthodox medical therapy by more educated persons. This finding differs from earlier studies that suggested that somatisation was commoner among less-educated patients. [4] It does seem to be complementary to some other studies that have suggested that the association of somatisation with education may not be a consistent relationship. [1]

**Table II: Relationship between somatisation disorders and socio-demographic characteristics**

Characteristics	Somatisation disorder		Total	Statistics	P-value
	Yes (%)	No (%)			
Age (Years)					
≤35	77 (59.2)	53 (40.8)	130	$\chi^2 = 12.13$	0.02
36-64	70 (48.3)	75 (51.7)	145		
≥65	78 (39.6)	119 (60.4)	197		
Sex					
Male	95 (48.0)	103 (52.0)	198	$\chi^2 = 0.01$	0.91
Female	130 (47.4)	144 (52.6)	274		
Marital status					
Never married	49 (53.9)	42 (46.2)	91	$\chi^2 = 5.91$	0.05
Married	176 (46.9)	200 (53.2)	376		
Separated	0 (0.0)	5 (100.0)	5		
Level of Education					
Nil	22 (34.4)	42 (65.6)	64	$\chi^2 = 9.78$	0.03
Primary	65 (43.6)	84 (56.4)	149		
Secondary	87 (53.4)	76 (46.6)	163		
Tertiary	51 (53.1)	45 (46.9)	96		
Employment status					
Unemployed	13 (22.8)	44 (71.2)	57	$\chi^2 = 16.06$	0.000
Employed	212 (51.1)	203 (48.9)	415		

**Table III: Diagnoses made by physicians among patients with somatisation disorders**

Physician's Diagnosis	Frequency	Percentages
Psychological disorders	28	12.4
Musculoskeletal disorders	19	8.4
Infections/infestations	71	31.6
Cardiovascular diseases	67	29.8
Endocrine disorders	18	8.0
Gynaecological Disorder	18	8.0
Seizures	4	1.8

In the present study, a higher number of somatisation disorder was reported by patients below the age of 35 years. These finding is not new and has been reported in keeping with the natural epidemiology of the disorder. [17]

The recognition of medically unexplained symptoms by primary care physicians was relatively low. In the present study, only 12.7% of the participants with somatisation were recognized as having psychological disorders.

Increasingly, several studies have shown that the ability to detect psychological disorders in the primary care setting is low; for example, in a World Health Organization study in 1996, only half of the patients with psychological disorders were detected by primary care physicians. [17] Similarly, in a study among primary care physicians in the Gaza strip, they found a low rate of detection of mental disorders (11.6%) by general practitioners. [18] The authors reported that certain factors helped the diagnosis much easier despite the



low rate of detection among the attendees. Such factors that were inherent with the general practitioner, such as age (greater than 40 years), female sex, and some level of postgraduate training. Patient factors included sex, age, and severity of the mental disorder. In Nigeria, it was reported that only 13.8% of the psychiatric cases were correctly identified by primary care physicians. [19] Undoubtedly, unlike severe mental illnesses that are easily recognizable, somatoform disorders are similar to several organic diseases and may be missed. In the present study, physicians were more likely to diagnose infections or cardiovascular diseases as the main diagnosis in patients with somatisation. The inability to recognise somatisation by physicians can be detrimental to proper management, may cause frequent visitations, incur enormous costs from multiple investigations and increased disabilities. Furthermore, it can put much stress on the physicians due to poor treatment satisfaction by the patients. [20]

The present study did not explore factors that could account for such a low rate of detection by doctors in the primary health care setting. However, previous studies have broadly grouped the variety of factors into two, ie patient-related factors and doctor-related factors and criteria-based classification. [20] Another limitation is the use of only one health facility for the study; this limits the generalization of the findings in the study. This study showed that patients with somatisation or medically unexplained symptoms constitute a considerable population in primary health care centres and may not be missed. There is a need to improve the capacity of primary care physicians in recognizing patients with somatisation.

## Conclusion

The moderate prevalence rate and low rate of detection of somatoform disorders should help

generate attention towards patients with somatisation or medically unexplained symptoms. This study reported that the level of education and employment status at presentation at primary health care centres were associated with somatisation. Physicians in a primary health care setting should have a high index of suspicion, especially when dealing with patients with multiple unexplained symptoms. Encouraging regular training courses for primary health care physicians will also help in boosting their confidence in making the appropriate diagnosis. The treatment of somatoform disorders would do much to enhance the capability of physicians in the detection and proper management of patients with somatoform disorders.

**Authors' Contributions:** OOO conceived the study, participated in data collection, analysis and drafting of the manuscript. ATO participated in data analysis and interpretation and the drafting of the manuscript. OBS, AOO and AAO participated in data collection and analysis. All the authors approved the final version of the manuscript.

**Conflict of Interest:** None.

**Funding:** Self-funded

**Publication History:** Submitted 18 December 2019;

Accepted 05 April 2020.

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