Mental Health in Primary Care: Co-Morbid Anxiety and Depression in Akwa Ibom State, Nigeria

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Authors' contributions

This work was carried out in collaboration between both authors. Author UKA designed the study and wrote the protocol. Author JHE performed the statistical analysis, managed the literature search. Author UKA wrote the first draft of the manuscript with assistance from author JHE. Both authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Mental health is a state of wellbeing in which individuals realize his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to his or her community. Mixed and anxiety and depression is a mental disorder that does not allow people to achieve mental health.
Aim: To determine the prevalence and socio-demographic features of respondents diagnosed with mixed anxiety and depression in an outpatient of a general clinic.
Methods: 245 respondents were randomly selected from an outpatient of a general clinic and screened for anxiety, depression and mixed anxiety and depression with the Hospital anxiety and depression scale.
Results: 17.5% (n=43) of the respondents had mixed anxiety and depression, 36.7% (n=90) had anxiety and 24.5% (n=60) had depression. Mixed anxiety and depression was commoner among age group 30-39 years n=10 (23.3%), married respondents n=24 (55.8%), civil servants n=19 (44.2%), post secondary education level respondents n=18 (41.9%), and those that earned less than 10000 naira per month n=18 (41.9%).

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Conclusion: Mixed anxiety and depression is common in our environment. It is needful to screen patients attending the primary care facility for this condition for early diagnosis to prevent the psychological, social and physical impairment that could affect the individual and extend to the family.

Keywords: Mental health; mixed anxiety and depression; screening.

1. INTRODUCTION

World Health Organization (WHO) defines mental health as a state of wellbeing in which individuals realize his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to his or her community [1]. Mental health disorders which affect hundreds of millions worldwide [2] has hindered people from having good and balanced mental health. These mental disorders are anxiety, depression, schizophrenia, somatoform disorders, drug abuse, alcoholism and others. Sometimes, these disorders may co-occur.

By way of definition, International Classification of Disease 10th Edition (ICD-10) describes mixed anxiety and depression disorders as condition when symptoms of anxiety and depression are both present but neither is clearly predominant and neither type of symptoms is present to the extent that justifies a diagnosis if considered separately [3].

Anxiety and depression are common with estimated combined prevalence varying between countries but over 10% in western countries [4]. World health organization large scale study on psychological disorders in primary care in 14 countries found depression (11.7%), anxiety disorder (10.5%) and co-morbid anxiety and depression (4.6%) [5].

Studies have reported different prevalence. Marchesi et al. [6] found 2.7% mixed anxiety and depression in Emergency department study in Italy, Gaynes et al. [7] who studied primary care and psychiatric outpatients with co-morbid depression and anxiety found rates as high as 50%. While a study in United Kingdom found mixed anxiety and depression 7% in men and 12% in women according to the United Kingdom national statistics for year 2000 [8].

Having combined anxiety and depression is a burden on the patient and the family, these patients have more psychological, physical and social impairment than do patients that have either illness [9]. The effects are cognitive impairments [10], declining productivity [11], functional disability [12] and loss of days at work and reduced performance in the family [13].

This paper is to determine the prevalence and socio-demographic features of respondents diagnosed with mixed anxiety and depression in an outpatient of a general clinic in Uyo, Akwa Ibom State, Nigeria.

2. MATERIALS AND METHODS

The study was carried out at the General Outpatient Clinic of the University of Uyo Teaching Hospital, a tertiary health institution in Uyo, Akwa Ibom State, Nigeria. The Hospital is a 400-bed tertiary Hospital serving the entire Akwa Ibom State citizens and neighbouring States of Cross River, Abia and Rivers. It was a cross sectional descriptive study.

Data was collected from 245 participants within a period of three months, January to March 2011. The method of subject selection was systematic random sampling. The first patient was selected by simple random sampling and subsequently every 41st subject was selected into the study because the sampling interval was 41. The sample size was determined using the formula:

$$N = \frac{Z^2 PQ}{D^2}$$

Participants were adults 20 years and above attending the General Outpatient Clinic. They were screened using a semi-structured questionnaire which comprised socio-demographic variables age, sex, marital status, educational level, occupation, tribe, religion and Hospital Anxiety and Depression scale for scores on anxiety and depression. The Hospital Anxiety and Depression scale was developed by Zigmond and Snaith in 1983 to assess levels of anxiety and depression in patients in non psychiatric settings and primary care clinics [14]. It is a self reporting questionnaire comprising 14 four point scale items made of seven (7) items for anxiety subset and seven (7) items for depression subset. Each item has a score of 0-3 with the lowest total score of zero and the

highest total score of 21. Score of 0-7 is regarded as negative, 8-10 is mildly positive, 11-14 is moderately positive and 15-21 is severely positive. Using a cut off of 8, four groups of respondents were identified, these groups were case level anxiety group, case level depression group, case level co-morbid anxiety and depression group and a no case group. Hospital anxiety and depression scale shows good case finding properties for anxiety and depression in in-patient population, primary care clinics and general population [15]. It takes 2-5 minutes for the interviewer or respondent to complete the questionnaire; it is acceptable by the population for which it is designed. The internal consistency for HADS anxiety subset was 0.78-0.93 and for depression subset 0.82-0.90 [16]. Validity studies have been done in Nigeria, Spain and Iran [17-19].

Prior to the study, a pretest was done to test applicability of the instrument. All respondents diagnosed with anxiety and depressions or mixed anxiety and depression who were receiving treatment and those too ill to participate were excluded from the study. Informed consent was received from the respondents and ethical approval was received from the Ethics and Research Committee of the University of Uyo Teaching Hospital.

2.1 Data Analysis

The result of the study was analysed using the statistical package for social sciences (SPSS 17.0). Proportions of respondents who had anxiety, depression and mixed anxiety and depression were found from the study. Percentages were calculated with simple frequency tables, Chi square was done and level of significance was set at $p=0.05$.

3. RESULTS

A total of 245 respondents were recruited from the population attending the General Outpatient Clinic. Table 1 shows the socio-demographic characteristics of respondents. Mixed anxiety and depression were present in n=43 (17.5%) out of 245 recruited for the study. Age group 30-39 years had the highest frequency n=10 (23.3%). Females n=28 (65.1%) were more affected than males. Those respondents with post secondary education were more affected n=18 (41.9%).

Considering marital status, married respondents n=24 (55.8%) were more than others in that

group, civil servant n= 19, (44.2%) were mostly affected by this condition and respondents that earned less than 10,000 naira per month n=18 (41.9%) had more anxiety and depression than others in the group see Table 1.

Table 2 shows the prevalence of anxiety 36.7%, depression 24.5% and 17.5% mixed anxiety and depression.

Table 3 shows multivariate analysis of socio-demographic variable occupation and tribe which were not independent predictors of mixed anxiety and depression among the study group.

4. DISCUSSION

Mixed anxiety and depression was taken to be rare or even none existent in our environment but this study has demonstrated that this condition does exist. Among 245 respondents studied, 43 of them (17.5%) had mixed anxiety and depression. This figure is high compared to 2.7% that was found among patients in emergency department in Italy [6], 7.0% in males in United Kingdom and 12% in females in United Kingdom [8] but low compared to nearly 50% mixed anxiety and depression found by Gaynes et al. [7].

Females were more affected by mixed anxiety and depression in this study as was found in a study in Belgium [20]. Generally, females are prone to mental disorders than males as found by several studies. Married respondents 55.8% in this study had this condition which compares with 58% that was found in another study having a similar illness [21], so more work is needed to find out whether marriage as was said previously really protects against psychological disorders.

More respondents in this study with post secondary education screened positive for mixed anxiety and depression contrary to known records that higher educational level lead to higher income which protects against mental disorders especially anxiety and depression [22].

Agreed, low income is a risk factor for development of mental disorders, as income is an indicator of socioeconomic status. Respondents in this study that earned less than 10,000 naira per month ie less than 50 dollars had more anxiety and depression [23] and poverty is known to lead to economic distress [24]. This buttresses that mixed anxiety and depression is commoner in the lower social class [25].

Table 1. Socio demographic characteristics and mixed anxiety and depression among the respondents

Variable	Mixed anxiety and depression		Total (n=245)	Statistical indices
	Present (n=43)	Absent (n=202)		
Age				
20-29	9 (20.9)	51 (25.3)	60 (24.5)	χ^2=3.7161
30-39	10 (23.3)	55 (27.2)	65 (26.5)	Df =5
40-49	7 (16.3)	42 (20.8)	49 (20.0)	P value =0.553*
50-59	9 (20.9)	34 (16.3)	43 (17.6)	
60-69	5 (11.6)	11 (5.5)	16 (6.5)	
70 and above	3 (7.0)	9 (4.5)	12 (4.9)	
Sex				
Male	15 (34.9)	69 (34.2)	84 (34.3)	χ^2=0.0053
Female	28 (65.1)	133 (65.8)	161 (65.7)	Df =1
				P value =0.928
Educational level				
None	2 (4.7)	6 (3.0)	8 (3.3)	χ^2=1.9831
Primary	8 (18.6)	29 (14.4)	37 (15.1)	Df =4
Secondary	12 (27.9)	46 (22.7)	58 (23.7)	P value =0.636*
Post-secondary	18 (41.9)	107 (53.0)	125 (51.0)	
Others	3 (7.0)	14 (6.3)	17 (6.9)	
Marital status				
Single	13 (30.2.)	61 (30.2)	74 (30.2)	χ^2=0.1870
Married	24 (55.8)	116 (57.4)	140 (57.1)	Df =3
Separated	1 (2.3)	3 (1.5)	4 (1.6)	P value =0.921*
Widow	5 (11.6)	22 (10.9)	27 (11.0)	
Occupation				
Civil servant	19 (44.2)	81 (40.1)	100 (40.8)	χ^2=7.9092
Farmer	6 (14.0)	19 (9.4)	25 (10.2)	Df =4
Self employed	4 (9.3)	47 (23.3)	51 (20.8)	P value =0.086*
Trading	10 (23.3)	25 (12.4)	35 (14.3)	
Student	4 (9.3)	30 (14.9)	34 (13.9)	
Tribe				
Ibibio	34 (79.1)	178 (88.1)	212 (86.5)	χ^2=7.9723
Igbo	7 (16.3)	14 (6.90	21 (8.6)	Df =4
Hausa	1 (2.3)	1 (0.5)	2 (0.8)	P value =0.158*
Yoruba	0 (0.0)	2 (1.0)	2 (0.8)	
Others	1 (2.3)	7 (3.5)	8 (3.3)	
Income (N)				
1-10,000	18 (41.9)	97 (48.0)	115 (46.9)	χ^2=0.5750
10,000-50,000	17 (39.5)	70 (34.7)	87 (35.5)	Df =3
50,000-100,000	6 (14.0)	27 (13.4)	33 (13.5)	P value =0.854*
Above 100,000	2 (4.7)	8 (4.0)	10 (4.1)	

No statistical difference between those with disorder and those without disorder.
*= Fishers exact

Table 2. Showing the prevalence of anxiety, depression and mixed anxiety and depression among respondents

		Anxiety		Total
		Present	Absent	
Depression	Present	43	17	60
	Absent	47	138	185
Total		90	155	245

Table 3. Multivariate analysis; mixed anxiety and depression

Variable	Odd ratio	95% CI	P value
Occupation	1.02	0.82-1.27	0.878
Tribe	1.06	0.63-1.77	0.831
Occupation			
Civil servants	1.0 (ref)		
Farmers	1.35	0.47-3.83	0.577
Self employed	0.36	0.12-1.13	0.080
Traders	0.57	0.19-1.81	0.338
Students	1.71	0.70-4.14	0.238
Tribe			
Hausa	1.0 (ref)		
Ibibio	0.19	0.01-3.13	0.246
Igbo	0.5	0.03-9.24	0.641
Others	0.14	0.01-4.61	0.272

No association between occupation and tribe with occurrence of mixed anxiety and depression.

Unrecognized co-morbid anxiety and depression is associated with increased rate of psychiatric hospitalization [26] and increased rate of suicide attempt [27]. This high prevalence of mixed anxiety and depression in our society calls for action ie diagnosis and treatment to prevent frequent hospitalization, suicide attempts, increased health care cost and untoward effects on the family.

The limitation of the study may be the screening instrument that was used for the diagnosis so another study may be done with another instrument to collaborate this findings.

5. CONCLUSION

Mixed anxiety and depression is common in our environment. It affected 17.5% of the respondent, it was commoner among young person age group 30-39 years, females, married respondents and respondents that earned less than 10,000 naira per month (<50$) per month. It is needful to screen patients attending the primary care facility for this condition for early diagnosis to prevent the psychological, social and physical impairment that could affect the individual and extend to the family.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. WHO definition of mental health. Available:www.who.int/features/factfile/me ntalhealth Updated August 2014. (Accessed January 2015)
2. Intergrating mental health into primary care: A global perspective. World health Organization and World Organization of Family Doctors. 2008;231.
3. WHO ICD-10 classification of mental and behavior disorders: Clinical description and diagnostic guideline. WHO; 1992.
4. Cape J, Whittington C, Buszewics M, Wallace P, Underwood L. Brief psychological therapies for anxiety and depression in primary care: Meta-analysis and Meta-regression. BMC Medicine. 2010;8:38. (Doi.10.1186/1741-7015-8-38)
5. Sartorius N, Ustun TB, Lecrubrier Y, Wittchen HV. Depression comorbid with anxiety: Result from WHO study on psychological disorder in primary health care. Br J Psychiatry. 1996;168(30):S38-S43.
6. Marchesi C, Brusamonti E, Borghi C, Giannini A, DI Ruvo R, Minaceo F, et al. Anxiety and depression disorder in an emergency department ward of a general hospital: A control study. Emerg Med J. 2004;21:175-179.
7. Gaynes BN, Rush AJ, Triveli MH, Wisniewski SR, Balasubramani GK, Spenser DC. Major depression symptoms in primary care and psychiatric setting: A cross-sectional analysis. Annals of Family Medicine. 2007;5(2):126-134.
8. Elisa Martin-Marino, Ana-Ruigomez, Mari-Ann Wallender, Saga Johanson, Luis Alberto, Garcia Rodriques Prevalence. Incidence, morbidity and treatment pattern in a cohort of patients diagnosed with

anxiety in UK primary care. Family Practice. 2010;27(1):9-16.

9. Kuzel RJ. Treating co-morbid depression and anxiety. J Fam Pract. 1996;43(6):S45-53.

10. Casteneda AE, Tunlio-Henricksson A, Martunen M, Suvisaari J, Lonngvist J. A review of cognitive impairment in depression and anxiety disorders with a focus on young adults. J Affect Discord. 2008;106(1)11-27.

11. Jackson J, Pasramonti M, Kroenke K. Outcome and impact of mental disorder in Primary care at 5 years. Psychosomatic Medicine. 2007;69:270-276.

12. Lecrubier Y. The burden of depression and anxiety in general medicine. J Clin Psychiatry. 2001;62(8):49. Discussion 10-18.

13. Boardman J. Work, employment and psychiatric disability. Advances in Psychiatric Treatment. 2003;9:327-334.

14. Zigmond A, Smith R. The Hospital anxiety and depression scale. Acta Psychiatry Scand. 1983;67:361-370.

15. Snaith R. The hospital anxiety and depression scale. Health Qual Life Outcomes; 2003;1:29.
    Available:www.hqlo.com/content/1/1/29

16. Mykletun A, Stordal E, Dalh AA. Hospital Anxiety and depression scale. Factor structure, item analysis and internal consistency in a large population. Br. J. Psychiatry. 2001;179:540-544.

17. Abiodun O. Validity study of the Hospital anxiety and depression scale in General Hospital and community Sample in Nigeria. Br. J. Psychiatry. 1994;165:669-672.

18. Herrero MJ, Blanch J, JM, De Pablo J, Pintor L, Bulbenatt A. A validation study of the hospital anxiety and depression scale (HADs) in a Spanish population. General Hospital Psychiatry. 2003;25(4):277-83.

19. Montazeri A, Vahdaninia M, Ebrahimi M, Jarvandi S. The hospital anxiety and depression scale (HADs) translation and validation study of the Iranian. Version Health Quality Life Outcomes. 2003;1:14. Available:www.hqlo.com/content /1/1/14

20. Ansseau M, Fisher B, Dierick M, Albert A, Leyman S, Mignon A. Socioeconomic correlates of generalized anxiety disorder and major depression in primary care: the GADIS 11 study (generalized anxiety and depression impact survey 11). Depression and Anxiety. 2008;35(6):506-13.

21. Goldfarb MR, Trudel G, Boyer R, Precille M. Marital relationship and psychological relationship: its correlates and treatment. Sexual and Relationship Therapy. 2007; 22:109-126

22. Bjelland I, Krokstad S, Mylekun A, Dahl A, Tell G, Tambs K. Does a higher educational protect against anxiety and depression? The HUNT Study Soc Sci Med. 2008;1-12.

23. Patel V, Kleinman A. Poverty and common mental disorders in developing countries. Bulletin of the World Health Organisation. 2003;81:609-18.

24. Aidoo M, Harpham T. The explanatory models of mental health among low income women and health care practitioners in Lusaka, Zambia. Health Policy and Planning. 2001;16:206-13.

25. Murali V, Oyebode F. Poverty, social inequality and mental health. Advances in psychiatric Treatment. 2004;10:216-224.

26. Kessler RC, Stang PE, Wittchen HU. Lifetime panic-depression co-morbidity in the national co-morbidity survey. Arch Gen Psychiatry. 1998;55:801-808.

27. Roy-Byrne PP, Stang P, Wittchen HU. Lifetime panic-depression co-morbidity in the national co-morbidity survey: Association with symptoms, impairment course and help-seeking. Br J Psychiatry. 2008;176:229-235.