Psychiatric morbidity among dental patients attending a tertiary hospital in Lagos

***Coker AO, **Awotile AO, **Ogunbanjo BO**

*Department of Psychiatry, Lagos State University College of Medicine, Ikeja
** Dental Department, Lagos State University Teaching Hospital, Ikeja
Lagos, Nigeria

Correspondence: Coker AO
E-mail: cokerrotimi@gmail.com

Abstract

Objective: It has been noted that oral health conditions have significant relationships with mental illnesses. In Nigeria, a large number of individuals with psychological morbidity also visit dental health practitioners regularly and few psychopathological studies have been carried out to determine the prevalence of psychopathology in dental patients in Lagos. The aim of this study was to determine the general psychological wellbeing, symptoms of anxiety and depression among patients who were attending the dental clinic for restorative and oral surgery in Lagos.
Method: One hundred and three consecutive dental patients who were attending the dental clinic of the Lagos State University Teaching Hospital (LASUTH), Ikeja, Lagos were recruited for this study. Patients were administered with the 12th version of the General Health Questionnaire (GHQ), and Hospital Anxiety and Depression Scale (HADS).
Result: One hundred and three patients (50 males and 53 females) aged 20-61 years (mean age 38.3± 10.7 years) participated in the study. The reasons for attending the dental clinic ranged from unbearable pain 81(78.6%), filling of teeth 9(8.7%), extraction 6(5.8%), check-up 4(3.9%) and fixing of braces 3(3.0%). Subjects who scored more than 3 in the GHQ were 17.5 %. On the HADS scale, 28.2 % had a high score in anxiety while 14.6 % scored high in depression.
Conclusion: This study shows that a high percentage of dental patients also suffer from psychopathology especially anxiety and depression. These findings have been observed to constitute complex psycho-social problems with far reaching social and medical consequences among dental patients. The acquisition of psychotherapeutic tools by dental surgeons for assessing and managing dental patients with psychopathology will enhance the quality of practice and service delivery of dental surgeons.

Key words: psychiatry, morbidity, dental patients

Introduction

Psychiatric morbidity such as anxiety and depression has been reported to be common in patients presenting to dental practitioners [1]. Most dental health care professionals also come across patients with mild to moderate mental illnesses [2]. Dental health practitioners have also been noted to treat patients who have co-morbid mental disorders without recognizing or paying attention to the observed mental symptoms [2]. This has been found to lead to delays in commencing treatment for the observed mental disorder symptoms and the inappropriateness of the dental treatments for physical symptoms originating from mental disorders [3]. Mental health and oral health have been noted to have impact on each other because dental health disorders can arise from side effects of psychiatric medications while some dental ailments can actually be some manifestations of psychiatric illnesses [3,4]. Thus, it has been observed that mental illness can predispose psychiatric patients to oral health disorders [4]. Again, studies show that oral health conditions have significant relationships with mental illnesses that range from enamel erosion as seen in bulimia nervosa and anorexia nervosa, gingival recession found in people of anankastic personalities, manic patients, individuals dependent on cocaine, through xerostomia, anxiety disorders to atypical odontalgia in people with depression or somatoform disorder [5]. Narcoleptics such as frequent heroin and cocaine abuse have been implicated in the aetiologies of oral health disorders [2]. Psychotropic medications are also frequently implicated in oral health disorders especially anticonvulsants and antidepressants. The observed side effects of neuroleptics include gingival hypertrophy, fissured tongue, protrusion of tongue, caries and tardive dyskinesia that can damage the teeth due to frequent grinding of teeth [6]. Nonetheless, these psychiatric signs or symptoms may be missed by the dental practitioners if they are not trained in recognising psychopathology [1,3,5].
Dental anxieties reported in dental patients have been found to pose certain problems for the dental health practitioners and this psycho-pathological state also interferes with the treatment by the dentist [5]. In one study carried out by Aartman et al [4] where general

psychopathology were assessed in a cohort of dental patients with Symptoms Check List 90 (SCL 90), they found no significant psychopathological disorders among these cohorts. Dental pain however can cause anxiety while anxious dental patients are likely to have more pain during dental treatment [7]. This is because anxious patients with pain memory from previous treatment are likely to expect pain during current treatment [8]. Dental anxiety can also affect dental procedures especially in patients undergoing oral surgical procedures [9]. The relationship between pain and depression has been documented to be significant; however, low moods seen in depressed patients may affect the perception of pain during dental treatments [10,11,12]. Jalevik and Klingberg [13], also reported that dental fear and anxiety were common in 9-year-old children with severe enamel hypo-mineralization. In the Nigerian society, large numbers of individuals with dental anxiety or dental phobia also visit dental health practitioners regularly and very few studies have been carried out to determine the prevalence of psychopathology in Nigerian dental patients.

The aim of this study was to determine the general psychological wellbeing, symptoms of anxiety and depression among patients who were attending the dental clinic for restorative and oral surgery in a teaching hospital in Lagos, State, Nigeria.

Materials and Method

Patients who were attending the dental clinic of the Lagos State University Teaching Hospital, (LASUTH) Ikeja and literate enough to fill the psychometric instruments were recruited for this study during the months of February to May 2007. The approval for the study was obtained from the Ethics and Research Committee of the hospital. Informed consents were obtained from individual patients who participated in the study. The patients were administered with the 12th version of the General Health Questionnaire (GHQ) [14]. GHQ-12 is a short version of the GHQ which was designed as a self-administered screening instrument aimed at distinguishing between psychological ill-health and well-being. It assesses the symptoms of anxiety, depression and social dysfunction. It has been used in this environment in both academic and field studies [15]. The cut-off point of 3 was used and respondents with scores less than three were regarded as having no psychological morbidity while those who scored 4 and above were considered as having psychological morbidity. The Hospital Anxiety and Depression Scale (HADS) was also administered on these patients. The HADS is a questionnaire designed to detect anxiety and depression in medical outpatients. It has two sub scales namely anxiety and depression, each with seven questions [16]. The scores range from a minimum of zero to a maximum of three per question. The maximum score per subscale is 21. Scores between 0 and 7 are generally regarded as non-cases while those between 8 and 10 are regarded as "doubtful cases". Scores between 11 and 21 are regarded as "definite cases." For the purpose of this study, "cases" were considered as scores of 11 and above and non-cases, scores of 10 and below. The HADS has been used in Nigeria and found to have a high sensitivity and specificity [17].

Result

One hundred and three patients (50 males and 53 females) aged 20-61 years (mean 38. 3 $\pm$10.7 years) were included in this study. Of the 103 patients, 18 (17.5 %) had GHQ - 12 scores greater than 3. Table 1 shows the reasons given by the subjects for attending the dental clinic; 81 (78.6%) had unbearable pain, 9(8.7%) for filling of the teeth, 6(5.8%) for extraction, 4(3.9%) for check-up and 3(3%) to fix braces. Table 2 shows the results of patients' HADS scores. Twenty nine (28.2 %) were diagnosed as having anxiety disorder based on their scores while 15 (14. 6 %) scored high in depression subscale. Table 2 shows that patients with unbearable pain 79% were the reasons for attending the clinic followed filling of teeth 9%, extraction 6%, general check-up 4% while 2% came for braces.

Table 1. Reasons given by subjects for attending the dental clinic

Reasons for attending dental clinic	N	(%)
Unbearable pain	81	(78.6)
Filling	9	(8.7)
Extraction	6	(5.8)
Check-up	4	(3.9)
Braces	3	(3.0)

Table 2. The Hospital Anxiety and Depression Scale Scores of study participants

HADS score	Anxiety Subscale N (%)	Depression Subscale N (%)
0-10	85 (82.5 %)	88 (85.4 %)
11-21	29 (28.2 %)	15 (14.6 %)

Discussion

The results of this study indicated that 18% of the studied patients had general psychopathology from the measures of the General Health Questionnaire (GHQ). This GHQ-12 scores suggest a high prevalence of psychological distress and probably psychiatric disorders in the study group. However, this observed psychiatric morbidity was comparatively lower than the reported figures of 17.5 % by other workers in other countries [1,3,6]. It has been reported that psychiatric distress may be as common in general dental practice as in general medical practice [22]. With regards to anxiety, 29% of the patients had anxiety disorder. Some workers have reported higher levels of anxiety disorders in their studies [23, 24, 25]. Although anxiety is common in the community, it has been reported to be particularly evident in hospital settings [26]. This probably explains higher levels of anxiety reported by these workers. It has also been reported that anxiety that is associated with dental pain especially burning mouth syndrome are the most recalcitrant to treat. Tarja et al [27] reported that dental patients who manifest with dental anxiety are likely to disregard their oral health which makes them to be at risk for dental caries and periodontal diseases. They further noted that dental patients with higher dental anxiety have poor relationship with their dentists. This may explain why Friedlander et al [28] reported that dentists should also be concerned with the

identification of patients with psychopathology due to its extensive association with dental pathology.

Fifteen (14.6%) of the studied subjects had high HADS scores which indicated some level of depression. Again, the proportion of high scorers in this study appears to be in line with 66% and 47% of a previous studies [3,30], but appears not as high as reported by some other researchers. Several studies have shown higher rates of depression (41-78%) in patients with dental and facial pain [26]. The reason suggested for this high prevalence of depression in dental patients was that dentists were significantly less knowledgeable about the impact of depression on dental patients [29]. The authors further suggested that dentists should acquire more knowledge about the significance of depression in their patients' response to dental therapy. The high prevalence of depression in dental patients shows that the diagnosis and treatment of depression in dental patients should be relevant to dentists because they are also primary health care providers [25]. It has been reported that when dentists suspect depression in their patients, they should convey this information to their patients for treatment by mental health experts [25, 26]. Dental patients with symptoms of depression view the dental environment negatively beyond just the threat of physically painful treatment which bring about social powerlessness in dental situations from conditioned distrust of dentist behaviour. This have been reported to further affect the self-esteem of depressed dental patients leading to fear of negative scrutiny [27,28].

This study showed that there is a need for dentists to acquire certain psychological skills in order to recognize, assess and manage dental patients with mild to moderate psychopathology. This will further enhance their behavioural and cognitive assessment skills, improve communication with patients, and augment patient-dentist relationship culminating in improved quality of service. The cognitive aspect of behaviour modification in this sense is aimed at restructuring the cognitive negative condition that will assist dental patients to regain control over their negative emotional thoughts. Other workers have also applied stress inoculation training (SIT) that involves relaxation and distraction, a form of systematic desensitization [8, 20]. Thus, for a holistic and optimal care of dental patients especially those with severe forms of psychopathology, a cross disciplinary effort involving dental surgeons and psychiatrists needs to be set up in most tertiary centres. For this reason, dental patients with psychiatric disorders can be helped by both the psychiatrists and the dental surgeons. Some workers have reported that dentists should consider a role in identifying dental patients with possible mental health problems and that role should include the ability to identify dental patients with undiagnosed mental health problems and to be aware of dental conditions which may be caused by mental health problems [26].

Conclusion

This study showed that a high percentage of dental patients also suffer from psychopathology. Thus, the acquisition of psychotherapeutic tools for assessing and managing dental patients with psychopathology will further enhance the quality of practice and service delivery of dental surgeons. This is because dental psychopathology constitutes a complex of psycho-social problems with far reaching social and medical consequences. It is therefore important that dental health practitioners should be aware of the varying presentations, assessment and management of some of their patients who also manifest with psychiatric disorders. Although this study is limited in its capacity for being used for generalisation, it nevertheless suggested the need for dental practitioners to acquire mental health skills. However, further research should be carried out on dental patients with psychopathology.

References

1. George S, Sekana A, Oyebode F. An update on psychiatric disorders in relation to dental treatment. Dent Update 2004 ; 31: 488-490, 493-494.
2. Longley AJ, Doyle PE. Psychiatric disorders and dental health. J Dent Hyg 2003; 77: 190-204
3. Miyachi H, Wake H, Katsushi T, Akira M, Tatsunori I. Detecting mental disorders in dental patients with occlusion related problems. Psych Child Neurosci 2007; 61: 313.
4. Aartman THA, Jongh A, Makkes PC, Hoogstraten J. Treatment modalities in a dental fear clinic and the relation with general psychopathology and oral health variables. Brit Dent J 1999; 186, 467.
5. Kleinhauz M, Eli T, Baht R,Shamay D. Correlates of success and failure in behaviour therapy for dental fear. J Dent Res 1992; 71: 1832 -1835
6. Berggren U. General and specific fears in referred and self-referred adult patients with extreme dental anxiety. Behav Res Ther 1992; 30: 395 - 401
7. Moore R, Brdsgaard I, Brin H. Manifestations acquisitions and diagnostic categories of dental fear in self referred population. Behav Res Ther 1991; 29: 51-60.
8. Ilana E. The multidisciplinary nature of pain, In: Soh G, Yu P. Phases of dental fear for four treatment procedures among military personnel. Mil Med 1992; 157: 294 - 297.
9. Weisenberg M, Raz T, Hener T. The Influence of film induced mood on pain perception. Pain 1998; 76: 365 - 375.
10. Corah NL, Gale EN, Elling SJ, Psychological stress reduction during dental procedure. J Dent Res 1979; 58: 1347 - 1351.
11. Trombelli L, Zangari F,and Calcura G. he psychological aspects of patients with burning mouth syndrome. Minerva Stomatol 1994; 5: 215-221.
12. Wardle J. Psychological management of anxiety and pain during dental treatment. J Psychosom Res 1983; 27: 399- 402
13. Jalevik B, Klingberg GA. Dental treatment, dental fear and behaviour management problems in children with severe enamel hypomineralization of their permanent first molars. Int J Paed Dent 2002; 12: 24-26.
14. Goldberg DP. The detection of psychiatric illness by questionnaire. Mausdley Monograph No. 21: Oxford University Press, London .1972.
15. Gureje O, Obikoya B. The GHQ-12 as a screening tool in primary care setting. Soc Psych Epidemiol 1990;25;276-280.
16. Zigmond AS, Snaith RP. The Hospital Anxiety and Depression Scale. Acta Psych Scand 1983; 67; 361-370.
17. Abiodun OA. A validity study of the Hospital Anxiety and Depression Scale in general hospital units and a community sample in Nigeria. Brit J Psych 1994; 165: 669-672

18. Moore R, Brodsgaard I. Differential diagnosis of odontophobic patients using DSM IV. Eur J Oral Sci 1995; 103: 121 -126
19. RoyByrne PP, Milgrom P, Tay kM, Weinstein P, Katon W. Psychopathology and psychiatric diagnosis in subjects with dental phobia. J Anx Dis 1994; 8: 19 - 31.
20. Opton, EM. Psychological stress and coping processes in the practice of Dentistry. Int Dent J 1969; 19: 415 - 427.
21. Berggren U. Long-term management of the fearful adult patient using behaviour modification and other modalities. J Dent Educ 2001; 65: 1357-1366.
22. Green R, Humphris G, Linsay S, Mellor A, Millar K, Sidebotham B. Psychiatric distress, pain and fear in patients in patients in general dental practice. Comm Dent Oral Epidemiol 1997; 25: 187-188.
23. Wake H. Psychosomatic study on anxiety and depression in patients with temporomandibular disorders. J Jap Stomatol Soc 1999; 48: 377-390.
24. Kloosa PW, Eber RM, Inglehart MR. Anxiety, stress, depression and patients response to periodontal treatment: Periodontists' knowledge and professional behaviour. J Periodontol 2007; 78: 64-71.
25. Moore R, Brodsgaard I, Rosenberg N. The contribution of embarrassment to phobic dental anxiety: a qualitative research study. BMC Psych 2004; 4: 10.
26. Korzun A, Ship JA. Diagnosing depression in patients with chronic facial pain. J Am Dent Assoc 1997; 128: 1680-1686.
27. Tarja K, Coldwell S, Getz T, Milgrom P, Roy-Berne P, Douglas SR. Psychiatric diagnoses among self-referred dental injection phobics. J Anx Dis 2000; 3: 299-312.
28. Friiedlander AH, West LJ. Dental management of the patient with major depression. Oral Surg Oral Med Oral Pathol 1991; 71: 573-578.
29. LloydWiliams F, Doerick C, Hillon D, Humphris D, Moulding G, Ireland R. A preliminary communication on whether general dental practitioners have a role in identifying dental patients with mental health problems. Brit Dent J 2001; 191: 625-629.
30. Malt UF, Nerdrum P, Oppedal B, Gunderson R, Holte M, Lone J. Physical and mental problems attributed to dental amalgam fillings: a descriptive study of 99 self-referred patients compared with 272 controls. Psychosom Med 1997; 1: 32-41.