Oral Health Status and Treatment Needs of In-Patients of a Nigerian Psychiatric Hospital

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ABSTRACT

Objective: Mental disorders have been reported to increase the risk to neglect of oral care. The objective of this study was to determine the oral health and treatment needs of psychiatric in-patients and compare with non-psychiatric patients.

Methods: This was a cross-sectional study conducted at the Federal Neuro-psychiatric Hospital, *Yaba,* Lagos and Lagos University Teaching Hospital, *Idi Araba,* Lagos. A structured questionnaire was administered by investigators to the two groups of participants case group (psychiatric patient) and the control group (dental patient with no psychiatric history). This included mini international neuropsychiatry interview (M.IN.I) questionnaire to ascertain the diagnoses. Other information sought included missing teeth, retained teeth, carious teeth and tooth wear lesions were noted during oral examination.

Results: A total of 167 participants were seen (81 were in the control group and 86 in the case group). Age range was from 18-90 years. The mean age was 41.44±14.98 years. All the participants (2.99%) with retained root were in case group. The majority (52.3%) of the participants in case group were dentate (p=0.001). The control group had the highest proportion of participants with good oral hygiene (p= 0.09). Carious teeth (p =0.33) and the number of teeth affected by tooth wear lesion were found to more in the case group (p= 0.02).

Conclusion: Psychiatric patients had poor oral health compared to non-psychiatric patients. There was also a higher restorative and surgical treatment need in psychiatric patients.

Keywords: oral, health, hygiene, caries, psychiatric.

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INTRODUCTION

Oral health is an important aspect of quality of life affecting eating, speech, appearance and social acceptance.[1] Poor oral health has been reported among various psychiatric populations.[2-5] Various diagnostic groups including schizophrenia, bipolar disorder, major depression and mental retardation, are at risk of developing dental problems.[6-9] This is because they often tend to neglect their oral health and they are usually neglected by relatives due to the stigma, misconception and negative attitudes of people around.[1]

The causative factors include psychotropic medications that reduce salivary flow, which invariably leads to poor oral health. Other causative factors include poor diet and their lethargic nature.[10] A sizeable proportion of psychiatric patients do not have good oral health habits such as regularly visiting a dentist or brushing their teeth.[11] The perceived need for dental care among psychiatric patients is low[12], and only a small proportion is aware of the caries-inducing potential of psychotropic drugs.[13] The apathy of carers, the staff and administrators of long-term facilities[14], and the inaccessibility of dental services[2] aggravate existing dental problems. The extent of dental disease in some group of psychiatric patients (e.g. schizophrenia) is directly related to the severity of symptoms.[6] Some delay seeking dental treatment because of dental phobia[15] and in rare instances, there might be damage to restorations due to overzealous toothbrushing.[16]

Federal Neuro-psychiatric Hospital, Yaba, Lagos is one of the largest specialist psychiatric hospital in Nigeria with a total of 11 wards and a combined bed capacity of about 500. In addition, the hospital has a drug rehabilitation unit comprising of two wards with a combined bed capacity of 40. There is

scanty information on oral health of psychiatric in-patients in Nigeria as the available study in Nigeria in literature was conducted among psychiatric outpatients. The aim of this study was to determine the oral health and treatment needs of psychiatric in-patients.

PATIENTS AND METHODS

Study setting/design

This cross-sectional study was conducted at the Federal Neuro-psychiatric Hospital, Yaba, Lagos and Lagos University Teaching Hospital, Idi Araba, Lagos.

Study population/sampling

One hundred in-patients with general adult psychiatric disorders were randomly recruited to take part in the study. Only 86 consented to participating in the study. The 86 participants constituted the case group. The 81 participants in the control group were randomly selected from patient in the dental center unit of the Lagos University Teaching Hospital, Idi Araba, Lagos.

Inclusion criteria

In-patients with psychiatric disorders aged 18 years and above, who were stable enough to attend to the questionnaire and cooperate with oral examination. Those who gave informed consent.

Exclusion criteria

Those with only substance related disorders and those who did not gave informed consent were excluded from the study.

Data collection tool and procedure

The psychiatrists interviewed the participants with mini international neuropsychiatry interview (M.IN. I) questionnaire to ascertain the diagnoses. The dentist assessed oral health through questionnaire and clinical oral examination. The sought information included demographic information, duration of mental illness, history of tooth loss, reason for tooth replacement and habits, missing teeth, retained root, filled teeth, carious teeth and tooth wear lesion.

Ethical consideration

Ethical approval for this study was obtained from Ethical and Research Committee of the Federal Neuro-psychiatry Hospital, Yaba. Written informed consent was also obtained from each participant.

Data analysis

Data collected was analyzed with IBM SPSS version 20.0. The statistical significance of outcomes was evaluated at 95% confidence level and significant association determined if $p < 0.05$.

RESULTS

A total of 167 subjects participated in the study, 81 participants were in the control group and 86 in the case group. The age range was from 18 years to 90 years. The mean age was 41.44+/- 14.98. The proportion of subject who had retained root was 5/167(2.99%). These were in the case group. A greater proportion of participants were female 88/167 (52.7%) (Table I). Table I shows that only 20.5% of participants in case group were married.

Table 2 shows a higher proportion of participant losing 1-5 teeth and in control group (p=0.01). Majority of participant in case group were dentate (52.3%)[p=0.001]. The commonest numbers of teeth replaced were 1-5 and the highest proportion of this replacement was in the case group (21%)[p<0.01]. Control group had the highest proportion of participant with good oral hygiene (p = 0.09)

Table 3 shows patients with longer duration of illness having more carious teeth (p =0.33). Number of teeth affected by tooth wear lesion to be highest in case group (p= 0.02).

DISCUSSION

The present study was conducted to determine the oral health status of psychiatric in-patients and to compare with general populace. There has been documentation that patient suffering from mental

Table I: Sociodemographics of the participants

Variables	Grouping		P value
	Cases	Control	
Sex			
Female	40	48	0.07
Male	46	33	
Marital Status			
Married	18	48	0.00*
Single	58	30	
Divorced	7	2	
Widowed	3	1	
Educational Level			
None	10	5	0.00
Primary	9	4	
Secondary	38	15	
Tertiary	29	57	
Age (years)			
20 – 30	24	23	0.69
31 - 40	21	24	
41 – 50	20	12	
51 – 60	10	10	
61 – 70	8	8	
> 70	3	4	

Table 2: Oral health status and treatment needs of participants.

Variables	Grouping		P value
	Cases	Control	
Number of missing teeth			
0	49	31	0.01*
1 – 5	18	43	
5 -10	4	3	
11 – 15	1	1	
> 15	-	1	
Reason for not replacing			0.37
Not aware	6	2	
Not bothered	11	16	
No money	1	2	
Others	2	2	
Tooth wear lesion			0.098
Attrition	12	12	
Abrasion	2	1	
Recession	3	-	
Number of tooth/teeth having tooth wear lesion			0.022*
1-5	13	6	
6- 10	-	6	
16 – 20	4	1	
> 20	1	-	
Carious teeth			0.33
1-5	16	12	
6 -10	4	1	
Oral hygiene			0.21
Fair	45	32	
Good	27	35	
Poor	14	14	

health are at risk of dental neglect and poor oral health.[17-19] In this study, missing teeth was higher in the control group which was similar to a report of lower missing teeth by Kumar et al.[10] among psychiatric patients in India but contrasted with reports in Spain and United Kingdom by Valesco-Ortega et al.[20] and Lewis et al.[21] respectively. In Kumar et al.[10] study, the reason for their finding was attributed to a higher percentage of younger age group seen. In this study a higher proportion of younger age group was also seen.

The proportion of those with good oral hygiene was higher in control group but this was not statistically significant. Previous studies[10,18] reported poor oral hygiene status among psychiatric patients. These studies did not compare with the general populace. A study done in a Nigerian teaching hospital amongst psychiatric outpatients noted poor oral hygiene status.[22] However, this study was done amongst the psychiatric patient populace alone.

Tooth wear lesion was noted to be high in the case group. Although tooth wear was not classified in this study, the majority of tooth wear involved the occlusal surface suggesting attrition that is common with bruxism. This finding was similar to a previous study.[23] The reason for increased tooth wear in psychiatric patient from literature review has been attributed to bruxism (grinding of teeth) and anti-psychotic medications.[24-26] Association of anti-psychotic drugs and bruxism have been documented in previous study.[27] Involvement of adrenergic, serotonergic, and dopaminergic systems in the pathogenesis of bruxism have also been suggested.[28] All of this explains the reason for the finding in this study. It also suggest that psychiatric patients are predisposed to tooth wear lesions especially abrasion and a need for restorative treatment.

Participant with chronic mental illness had increase number of carious teeth compared to those with short duration of mental illness. It has been reported that decayed teeth index score and duration of mental illness are associated.[11] The finding of this study also supports this report. Longer duration of mental illness resulted in an

Table 3: Relationship between oral health status and sociodemographics

Missing teeth	0	1-5	>5	P value
Age (years)				0.000
20-30	37	10	-	
31-40	30	13	2	
41-50	18	14	-	
51-60	7	12	1	
61-70	3	9	4	
>70	-	4	3	
Sex				0.511
Female	51	31	6	
Male	44	31	4	
Educational Level				0.010
None	1	6	1	
Primary	5	5	2	
Secondary	42	10	1	
Tertiary	43	36	4	

increase in the incidence of carious lesion as some of the psychiatric drug such as the antidepressants has been identified as a cause of caries.[29] Intake of this drugs predispose to higher risk of carious lesion and need for restorative treatment.

Retained roots were found in only the case group. This suggests surgical treatment need in this group. It has been suggested in previous studies that this population are insensitive to pain associated with illness and injury coupled with their tendency of oral health negligence[1] thereby explaining this finding.

CONCLUSION

This study was able to establish a poor oral health in psychiatric patient compared to non psychiatric patient with higher prevalence of caries, tooth wear and poor oral hygiene in psychiatric patient. There is also a higher restorative and surgical treatment need among psychiatric patient. It is recommended that dental treatment should be incorporated in the management of psychiatric patient.

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