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Biological Profile of Oral Health Subscribers in Both Tertiary and Secondary Healthcare Centres: A Postmorterm Analysis and Policy Implication

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Abstract: Oral health and dentistry in Africa have been afflicted by the problems characterizing the world's developing regions, such as poverty, malnutrition, high incidence of infectious diseases and child mortality, lack of oral health policy and inadequate national budget for oral health. The retrospective study period of 10 years, in both centres revealed 72,818 subscribers, of which 54.23% were from tertiary health centre (UBTH). Female subscribers were dominant in both centres; 54.89% (UBTH) and 56.06% (Central Hospital, Benin City), with the means and the analysis of variable between means and within means (ANOVA), with an F-test, one tail probability of P>0.05. We conclude that a well articulated strategy and policy on increased oral health subscription in our communities is most desirable. Integration of oral health into national and community health programs is recommended.

Key words: Biological · Profile · Oral health · Subscribers

INTRODUCTION

Oral health and dentistry in Africa have been afflicted by the problems characterizing the world's developing regions, such as poverty, malnutrition, high incidence of infectious diseases and child mortality, lack of oral health policy and inadequate national budget for oral health [1]. Oral health is a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and palate, periodontal (gum) disease, tooth decay and tooth loss and other diseases and disorders that affect the oral cavity [2] and craniofacial complex [3], oral health subscription pattern shows females are usually higher than males [4] most patient attend because of pains and subscription is however as from ages above 15 years [5]. Matsuola *et al.* [6] revealed higher subscription of males than females with age range from 20 years to 80 years. The proportion of adults with formidable pattern of dental attendance was lowest among those aged 25 - 34 years and highest among those aged 65 years and above. Males have lower attendance than females during survey done in Australian. [7].

MATERIALS AND METHODS

In this study, is in the tertiary healthcare centre, University of Benin Teaching Hospital, while the secondary healthcare Centre is the general Hospital, Benin City. These two centres are located in Egor and Oredo Local Government Areas respectively for ease of comparison of data. A retrospective analysis of non-confidential records of both centres was done within a study period of 1995 - 2015 representing a 10-year period. Estimate of oral health subscription by number, age and gender was done for the two centres. Statistical analysis was for means, analysis of variance between means and within means (ANOVA).

RESULTS

The retrospective study period of 10-year (1995-2005) in both the tertiary healthcare (University of Benin tertiary hospital) and secondary health care (General Hospital, Benin City) Centres have a combined attendance figure of 72,818 subscribers. Oral health subscription was more in the tertiary health care centre (54.23%) table 1.

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Most subscribed age is 21-30-year in both centres (UBTH 49.55%) Table 2 and(General Hospital 52.04%) table 5; with female subscription dominant in both centres; (54.89%) table 3 and (56.06%) table 6 respectively. The means and the analysis of variable between means and within means (ANOVA) Table 7, with an F-test, one tail probability of P > 0.05.

Table 1: Tertiary Healthcare Centre (University of Benin Teaching Hospital)

S/N	Period	Subscription
1.	1995 - 1996	2711
2.	1996 - 1997	2903
3.	1997 - 1998	3974
4.	1998 - 1999	3365
5.	1999 - 2000	4594
6.	2000 - 2001	5746
7.	2001 - 2002	5420
8.	2002 - 2003	3710
9.	2003 - 2004	3230
10.	2004 - 2005	3834
Total 10 years		39487

Table 2: Percentage Patients' Age distribution for the stud period in the tertiary Healthcare Centre, University of Benin Teaching Hospital, Benin City

S/N	Age in Years	Number	%
1.	0 - 1	108	0.27
2.	1 - 10	1905	482
3.	11 - 20	5946	15.05
4.	21 - 30	19565	49.55
5.	31 - 40	4893	12.40
6.	41 - 50	2749	6.96
7.	51 - 60	2354	5.96
8.	61 - 70	1247	3.16
9.	71 - 80	573	1.45
10.	81 - 90	124	0.32
11.	91 - 100	23	0.06
Total		39487	100

Mean age=29.67
SD=14.55
Variance=211.67

Table 3: Percentage Patients' Sex Distribution for the study period in the Tertiary Healthcare Centre, University of Benin Teaching Hospital, Benin City

S/N	Age in Years	Number	Male (%)	Female (%)
1.	0 - 1	108	48 (44.45)	60 (55.55)
2.	1 - 10	1905	724 (38.01)	1181 (61.99)
3.	11 - 20	5946	2378 (39.99)	3568 (60.01)
4.	21 - 30	19565	8609 (44.00)	10956 956.00)
5.	31 - 40	4893	2740 (55.99)	2153 (44.01)
6.	41 - 50	2749	1223 (44.49)	1526 (55.51)
7.	51 - 60	2354	1318 (55.99)	1036 (44.01)
8.	61 - 70	1247	449 (36.01)	798 (63.99)
9.	71 - 80	573	255 (44.50)	318 (55.50)
10.	81 - 90	124	60 (48.38)	64 (51.62)
11.	91 - 100	23	10 (43.48)	13 (56.52)
Total		39487	17814 (45.11)	21673 (54.89)

Total Mean:29.67
Male Mean:30.46
Female Mean:29.03

Table 4: Secondary Healthcare Centre (General Hospital, Benin City)

S/N	Period	Subscription
1.	1995 - 1996	3462
2.	1996 - 1997	3107
3.	1997 - 1998	3759
4.	1998 - 1999	4326
5.	1999 - 2000	3904
6.	2000 - 2001	3465
7.	2001 - 2002	3804
8.	2002 - 2003	2580
9.	2003 - 2004	2520
10.	2004 - 2005	2404
Total	10 Years	33,331

Table 5: Percentage Patients' age distribution for the Study Period in the Secondary Healthcare Centre, General Hospital, Benin City

S/N	Age in Years	Number	%
1.	0 - 1	30	0.09
2.	1 - 10	983	2.95
3.	11 - 20	5644	16.93
4.	21 - 30	17345	52.04
5.	31 - 40	2189	6.57
6.	41 - 50	4323	12.97
7.	51 - 60	838	2.51
8.	61 - 70	1052	3.16
9.	71 - 80	684	2.05
10.	81 - 90	226	0.68
11.	91 - 100	17	0.050
Total		33,331	100

Table 6: Percentage Patients' sex distribution for the study period in the Secondary Healthcare Centre - General Hospital, Benin City

S/N	Age in Years	Number	Male (%)	Female (%)
1.	0 - 1	30	14 (46.67)	16 (53.33)
2.	1 - 10	983	394 (40.00)	589 (60.00)
3.	11 - 20	5644	334 (59.20)	2303 (40.80)
4.	21 - 30	17345	5249 (30.26)	12096 (69.74)
5.	31 - 40	2189	1172 (53.54)	1017 (46.46)
6.	41 - 50	4323	3320 (76.80)	1003 (23.20)
7.	51 - 60	838	439 (52.39)	399 (47.61)
8.	61 - 70	1052	342 (32.51)	710 (67.49)
9.	71 - 80	684	292 (42.70)	392 (57.30)
10.	81 - 90	226	74 (32.74)	152 (67.26)
11.	91 - 100	17	7 (41.12)	10 (58.82)
Total		33,331	14644 (43.94)	18687 (56.06)

Total Mean=29.95
Male Mean=31.18
Female Mean=28.99

Table 7: Means and Analysis of Variance between means and within means (ANOVA)

S/N	Centre	Mean Age	Mean Number of Male Subscribers	Mean Number of Female Subscribers
1.	UBTH Benin City	29.67	30.46	29.03
2.	General Hospital, Benin City	29.95	31.18	28.99

F = 0.5973

The result of f-test, one-tail probability that variance in UBTH and General Hospital are not significantly different P>0.05.

DISCUSSION

The traditional treatment of oral diseases is increasingly becoming extremely costly even in industrialized countries and is unaffordable in most low and middle income countries [8]. Subscription pattern to oral health in the developing countries need to be evaluated both in number, age and sex and fine-tune effective mechanism to boast it. This will no doubt add to the gains of preventive, oral health strategies and avert future oral disease. It is common knowledge that dental caries is a major oral health challenge in most industrialized countries and it is on the increase in the developing countries, affecting 60 - 90% of school children and vast majority of adults. Our studies revealed age 21 - 30 years as highest subscribers. This is encouraging as it represents school age period with females more dominant.

Aesthetics is a major problem in the female generation, this generation of school age should be encouraged to attend oral healthcare centres. In most developing countries access to oral health services is limited and teeth are often left untreated or are extracted because of pain or discomfort. Tooth loss and impaired oral function are expected to increase as a public health problem in many developing countries [9], we therefore conclude that a well-articulated strategy and policy on increased oral health subscription in communities is most desirable. We recommend the integration of oral health into national and community health programmes to reduce future high human, financial and material resources required in the management of unchecked oral disease [10].

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