

## Oral Health Problems of Female Commercial Sex Workers in Mammy Market Nkwagu, Abakaliki Local Government Area, Ebonyi State, Nigeria

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### Abstract

The study on Oral health problems of female commercial sex workers in Mammy Market Nkwagu, Abakaliki Local Government Area, Ebonyi State was carried out to determine the oral health problems of the sex workers with a view to proffer solutions, create awareness and promote their oral health status. The research data were mainly collected through personal interviews and intra oral examination and the result was recorded in a data sheet. A total of 100 sex workers participated in the study. 21 oral health problems were observed. The most common oral health problems of the sex workers were dental plaque 45(15.05%), dental calculus 49(16.39%), dental stain 31(10.37%), and dental caries 38(12.71%). The hypothesis was tested using Z-test at level of significance of 0.05. The Z-test value -95.45 was not in the z-test table, therefore the alternative hypothesis was accepted while the null hypothesis was rejected. This shows that oral health problems were significantly high among the sex workers. It was recommended that the dental team should carry out oral health education for the sex workers in Mammy Market Nkwagu, Abakaliki Local Government Area, Ebonyi State, job opportunities should be created to reduce unemployment and government policies should be made to support sex workers inclusion.

**Key Words:** Dental Caries, Periodontitis, Dental Plaque, Sex Workers, Oral Health

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### I. Introduction

Oral refers to the mouth and it is the major gateway to the body. Food enters the mouth and is chewed and mixed with saliva on its way to the stomach and intestinal track. Microorganisms from the oral cavity have been shown to cause a number of oral infectious diseases, including caries, periodontitis, endodontic (root canal infections), alveolar osteitis (dry socket) and tonsillitis. The oral cavity includes several distinct microbial habitants such as teeth, gingival sulcus, attached gingivae, tongue, cheek, lip, hard palate and soft palate [1].

Health, according to World Health Organization (WHO), is a state of complete physical, mental and social wellbeing and not merely the absence of illness. Rather than restricting health to an absence of illness, health was conceptualized more in terms of the presence of absolute and positive qualities.

Oral health is a state of being free from chronic mouth and facial pain, oral and throat cancer, oral infections and sores, periodontal (gum) disease, tooth decay, tooth loss and other diseases and disorders that limit an individual's capacity in biting, chewing, smiling, speaking and psychological wellbeing. A good oral health enables a person to speak, eat and socialize without active disease, discomfort or embarrassment. Many general diseases are first indication of poor oral health and one of them is oral cancer [2].

Oral diseases or problems are preventable. Although this is a well established fact, the burden of oral diseases keeps increasing worldwide. Educational level, income, occupation, socioeconomic status and the community index are significantly associated with a greater occurrence of these diseases. People with low income have the most limited access to education, prevention and treatment. Factors that restrict regular dental care include misconceptions, dental fear and expense of dental care, unpleasant experiences and socioeconomic factors [3]. Sex work is the provision of sexual services for money or goods. Sex workers are women, men and transgendered people who receive money or goods in exchange for sexual services and who consciously define those activities as income generating even if they do not consider sex work as their occupation [4].

That sex workers are prone to sexually transmitted diseases and psychological problems is a well-known fact. The overall rehabilitation of the sex workers is unfortunately limited most of the time only to move them to another profession, but the focus should be on including health as an important factor. The focus in terms of health has always been on human immune deficiency virus (HIV) and sexually transmitted infections (STIs), while oral health fails to find even a mention. Until now, no study has been conducted related to the complete definition status and treatment needs among the sex workers [3].

## II. Methodology

An official visit was made by the researchers to the market to meet with the supposed organizer of the sex workers in order to have access to the market and the sex workers. The Mammy Market which has a population size of 100 female commercial sex workers came to be as a result of the industry of Mrs. Anthony Ochefu when she started a petty trade in 1959 at the Army Barracks Abakpa, Enugu State [5]. All the sex workers participated in the study. Relevant data were elicited through interview and examination of their oral cavity. All findings were carefully recorded in a specially designed data sheet. Data analysis was in simple frequency table and calculation of percentages. The formulated hypothesis for this study was tested using Z-test.

## III. Results

**Table 1:** Age range of the selected participants

Age range	Frequency	Percentage (%)
10-20	24	24.00
21-30	50	50.00
31-40	8	8.00
41-50	18	18.00
<b>Total</b>	<b>100</b>	<b>100</b>

Source: Field Survey, 2019

Table 1 above shows the age range of the selected participants. Among the participants, 24 (24.00%) are between 10-20 years, 50 (50.00%) are between 21-30 years and 8(8.00%) are between 31-40 years and 18(18.00%) are between 41-50 years.

**Table 2:** Educational level of the selected participants

Educational Level	Frequency	(%)
No Formal Education	40	40.00
FSLC	30	30.00
NECO/WAEC/SSCE (O'LEVEL)	16	16.00
OND/NCE	6	6.00
HND/BSC	4	4.00
MSC & Above	4	4.00
<b>Total</b>	<b>100</b>	<b>100</b>

Source: Field Survey, 2019

Table 2 above shows the educational levels of the selected participants. Among the participants, 40(40.00%) do not have any formal education, 30(30.00%) have first school leaving certificate (FSLC), 16(16.00%) have NECO/WAEC/SSCE certificate and 6(6.00%) have OND/NCE certificate, 4(4.00%) have HND/BSC certificates and 4(4.00%) have MSC/Above certificates.

**Table 3:** Oral Health Problems of the Participants

Oral Health Problems	Frequency	Percentage (%)
Dental plaque	45	15.05
Dental calculus	49	16.39
Dental stain	31	10.37
Materia alba	-	-
Halitosis	11	3.68
Gingivitis	5	1.67
Dental caries	38	12.71
Periodontitis	7	2.36
Gingival recession	10	3.34
Kaposi sarcoma	-	-
Simplex herpes virus	-	-
Oral candidiasis	-	-
Necrotizing ulcerative periodontitis	-	-
Aphthous ulcer	13	4.36
Erythma	3	1.00
Chelitis	5	1.67

Tooth Fracture	9	3.01
Hairy tongue	6	2.01
Abrasion	10	3.04
Attrision	11	3.68
Erosion	7	2.34
Alfraction	3	1.00
Supranumeral	8	2.68
Dens in dente	3	1.00
Macrodonia	7	2.34
Microdonia	7	2.34
Not affected	11	3.68
<b>Total</b>	<b>299</b>	<b>100</b>

Source: Field Survey, 2019

Table 3 above shows the oral health problems of the selected participants. A total of 100 participants were used for the study. The most common oral health problems are dental plaque 45(15.05%), dental calculus 49(16.39%), dental stain 31(10.37%) and dental caries 38(12.71%).

**Table 4:** Oral health problems of the selected participants according their age range

Oral health problems	Freq	(%)	Age Range Distribution							
			10-20	(%)	21-30	(%)	31-40	(%)	41-50	(%)
Dental plaque	45	15.05	12	15.78	25	16.89	3	9.37	5	11.62
Dental calculus	49	16.39	14	18.42	23	15.54	5	15.62	7	16.27
Dental stain	31	10.37	8	10.53	15	10.14	3	9.37	5	11.62
Materia alba	-	-	-	-	-	-	-	-	-	-
Halitosis	11	3.68	3	3.95	4	2.70	2	6.25	2	4.65
Gingivitis	5	1.67	3	3.95	2	1.35	-	-	-	-
Dental caries	38	12.71	8	10.53	18	12.16	4	12.50	8	18.60
Periodontitis	7	2.34	3	3.95	2	1.35	1	3.13	1	2.33
Gingival recession	10	3.34	2	2.63	4	2.70	3	9.37	1	2.33
Kaposi sarcoma	-	-	-	-	-	-	-	-	-	-
Simplex herpes virus	-	-	-	-	-	-	-	-	-	-
Oral candidiasis	-	-	-	-	-	-	-	-	-	-
Necrotizing ulcerative periodontitis	-	-	-	-	-	-	-	-	-	-
Aphthous ulcer	13	4.36	2	2.63	9	6.08	1	3.13	1	2.33
Erythma	3	1.00	-	-	3	2.03	-	-	-	-
Chelitis	5	1.67	1	1.32	3	2.03	-	-	1	2.33
Fracture	9	3.01	2	2.63	4	2.70	1	3.13	2	4.65
Hairy tongue	6	2.01	-	-	5	3.38	-	-	1	2.33
Abrasion	10	3.34	3	3.95	5	3.38	1	3.13	1	2.33
Attrision	11	3.68	3	3.95	5	3.38	2	6.25	1	2.33
Erosion	7	2.34	1	1.32	4	2.70	2	6.25	-	-
Alfraction	3	1.00	1	1.32	1	0.68	-	-	1	2.33
Supranumeral	8	2.68	3	3.95	4	2.70	1	3.13	-	-
Dens in dente	3	1.00	1	1.32	-	-	1	3.13	1	2.33
Macrodonia	7	2.34	2	2.63	3	2.03	1	3.13	1	2.33
Microdonia	7	2.34	2	2.63	4	2.70	-	-	1	2.33
Those not affected	11	3.68	2	2.63	5	3.38	1	3.13	3	6.97
<b>Total</b>	<b>299</b>	<b>100</b>	<b>76</b>	<b>100</b>	<b>148</b>	<b>100</b>	<b>32</b>	<b>100</b>	<b>43</b>	<b>100</b>

Source: Field Survey, 2019

Table 4 above shows the oral health problems of the sex workers according to their age range. With 21 oral health problems observed, those between 21-30 years were affected more with oral health problems with 12(15.78%) for dental plaque, 14(18.42%) for dental calculus, 8(10.53%) for dental stain, 8(10.53%) for dental caries.

**Table 5:** Oral health problems of the selected participants according to their educational levels

Oral health problems	Frequency	(%)	Educational Levels											
			Non-formal education	(%)	FSLC	(%)	O'Level	(%)	OND / NCE	(%)	HND / BSC	(%)	MSC & Above	(%)
Dental plaque	45	15.05	16	13.68	20	17.85	4	68.89	5	25.00	-	-	-	-
Dental calculus	49	16.39	23	19.66	14	12.50	7	15.50	3	15.00	2	50.00	-	-
Dental stain	31	10.37	10	8.56	15	13.39	5	11.11	1	5.00	-	-	-	-
Materia alba	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halitosis	11	3.68	4	3.42	5	4.46	1	2.22	1	5.00	-	-	-	-
Gingivitis	5	1.67	2	1.71	3	2.68	-	-	-	-	-	-	-	-
Dental caries	38	12.71	15	12.82	13	11.61	5	11.11	4	20.00	1	25.00	-	-
Periodontitis	7	2.34	4	3.42	2	1.79	1	2.22	-	-	-	-	-	-
Gingival recession	10	3.34	4	3.42	5	4.46	1	2.22	-	-	-	-	-	-
Kaposi sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Simplex herpes virus	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oral candidiasis	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Necrotizing ulcerative periodontitis	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aphthous ulcer	13	4.36	3	2.56	7	6.25	2	4.44	1	5.00	-	-	-	-
Erythma	3	1.00	-	-	1	0.89	1	2.22	1	5.00	-	-	-	-
Chelitis	5	1.67	2	1.71	-	-	2	4.44	1	5.00	-	-	-	-
Fracture	9	3.01	5	4.27	2	1.79	2	4.44	-	-	-	-	-	-
Hairy tongue	6	2.01	4	3.42	1	0.89	-	-	-	-	-	-	1	100.00
Abrasion	10	3.34	4	3.42	4	3.57	1	2.22	1	5.00	-	-	-	-
Attrition	11	3.68	6	5.13	2	1.79	2	4.44	1	5.00	-	-	-	-
Erosion	7	2.34	3	2.56	2	1.79	2	4.44	-	-	-	-	-	-
Alfraction	3	1.00	1	0.85	2	1.79	-	-	-	-	-	-	-	-
Supranumeral	8	2.68	1	0.85	4	3.57	3	2.68	-	-	-	-	-	-
Dens in dente	3	1.00	1	0.85	1	0.89	-	-	-	-	1	25.00	-	-
Macrodonia	7	2.34	1	0.85	3	2.68	2	4.44	1	5.00	-	-	-	-
Microdonia	7	2.34	2	1.71	3	2.68	2	4.44	-	-	-	-	-	-
Not affected	11	3.68	6	5.13	3	2.68	2	4.44	-	-	-	-	-	-
<b>Total</b>	<b>299</b>	<b>100</b>	<b>117</b>	<b>100</b>	<b>112</b>	<b>100</b>	<b>45</b>	<b>99.99</b>	<b>20</b>	<b>100</b>	<b>4</b>	<b>100</b>		<b>100</b>

Source: Field Survey, 2019

Table 5 above shows the oral health problems of the participants according to their educational level. From the table, those who have no formal education 40(40.00%) were mostly affected with oral health problems with 16(13.68%) of dental plaque, 23(19.66%) of dental calculus, 10(8.556%) of dental stain and 15(12.82%) of dental caries.

#### IV. Discussion & Conclusion

In this study, the oral health problems common among female commercial sex workers in Mammy Markert Nkwagu, Abakaliki Local Government Area of Ebonyi State was determined. From this study, 100 sex workers participated.

The age analysis shows that between **24(24.00%)** were between **10-20 years**, **50(50.00%)** were between **21-30 years**, **8(8.00%)** were between **31-40 years**, **18(18.00%)** This shows that the oral health problems affect those between 21-30 years mostly.

The educational level analysis shows that **40(40.00%)** had no formal education, **30(30.0%)** had FSLC certificates, **16(16.00%)** had NECO/WAEC/SSCE (O'LEVEL) certificates, **6(6.00%)** had OND/NCE and **4(4.00%)** had HND/BSC certificates and **4(4.00%)** had MSC/Above certificates. This shows that the sex

workers who had no formal education were mostly affected by the oral health problems. **11(3.68%)** were not affected with any oral health problem.

From the oral examination of the oral cavity of the sex workers 21 different oral health problems were observed. The most common were; dental plaque **45(15.05%)**, dental calculus **49(16.39%)**, dental stain **31(10.37%)**, dental caries **38(12.71%)**. The entire result portray that low income, lack of education, low awareness and high level of exclusion are the main causes of the participant's oral health problems.

This study showed a high level of oral health problems among the sex workers. 21 oral health problems were observed and the most common are; dental plaque, dental calculus, dental stain, dental caries, aphthous ulcer, abrasion and attrition. The age range mostly affected is those between **21-30(24.00%)** years. The educational level mostly affected are those who have no formal education **40(40.00%)**.

As oral health problems have negative impact on the quality of live and adversely affect vital functions, the researchers recommend that oral health awareness should be organized for the sex worker; more job opportunities should be created to curb unemployment and more social inclusion of sex workers to encourage their social, physical, mental, emotional and oral health.

### **V. Recommendations**

Following the researcher's observations, the following are recommended;

1. There is need for oral health awareness among the sex workers in Mammy Market Nkwagu, Abakaliki Local Government Area of Ebonyi State.
2. Sex workers should be involved in planning of oral health programs
3. Government policies should be made to support sex workers inclusion
4. Creation of job opportunities to reduce unemployment
5. Organization of seminars to teach sex workers good general and oral health

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