# Relationship between Quality of Marriages, Marital Counselling, and Oral Health Status of Married Female Worshippers Attending Religious Worship Centers in a Southwestern Nigerian Population

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## ABSTRACT

### BACKGROUND

Quality of marriage is a strong indicator of human general and oral health. Scientific reports have shown that happily married people tend to show signs of better health when compared to those with poor quality marriages. Women in unhappy marriages are exposed to chronic emotional stress with signs of impaired social behaviour, mental stress disorders, cardiovascular diseases, xerostomia, and orofacial pain disorders. Information on the effects of marriage on oral health is very scanty despite the huge influence of oral health on the quality of life. The objective of this study, therefore, was to highlight the impact of oral health care on the quality of marriage.

### MATERIALS AND METHODS

This was a longitudinal study of female religious worshippers in a south-western state of Nigeria. Major Religion Worship Centres (RWCs) in the chosen city were contacted through their leaders. Each RWC where consent was obtained from its leader was listed in each of the five local government areas in the city. One RWC was selected from the listed centres in each local government area using a simple random method, hence, a total of five local RWCs were selected. Married females in the selected RWCs were contacted through their leaders on the scheduled date. They were offered general and oral health education, and were asked to complete a structured questionnaire on their oral health and the quality of their marriages. Extra oral and intra-oral examinations were also carried out and the findings, recorded. Scaling and polishing was performed for all participants in a nearby state hospital, and also, non-operative routine dental treatments were delivered onsite. Thereafter, comprehensive marital counselling was delivered to each participant. Participants were reviewed weekly via telephone calls and at the eight week, they were physically visited in their RWCs for assessments following the initial intervention, and the reports were also recorded. Data analysis was done with STATA 16 software. The relationship between the frequency of oral lesions before and after the intervention was analysed usingT-test.

### RESULTS

A total of 113 married female religious worshippers participated in the study. Their mean age was 57.9 years SD 12.8. The majority (101, 92%) currently reside with

their husbands, 2(2%) are divorced, and 7% are widowed. Eighty-one (71.7%) reported good quality of marriages while 32 (28.3%) had poor quality of marriages. Oral lesions seen before intervention were periodontitis (30, 26.5%), xerostomia (25, 22.1%), mouth odour (22, 19.1%), and Orofacial/TMJ pain (27, 23.3%). Lesions were significantly more prevalent among those with poor quality of marriages. After intervention, the prevalence of mouth odour, periodontitis, xerostomia, and extra marital romantic relationship reduced significantly by 82% (p=0.04), 53% (p=0.001), 76% (p=0.001) and 89 % (p=0.024) respectively.

**CONCLUSION**

One-third of married, self-employed women in their fifth decade of life had poor quality of marriages. Oral lesions such as periodontitis, mouth odour, and xerostomia were more prevalent among married women with poor quality of marriage. Women with poor quality of marriage have 94.4% chance of getting involved in extramarital romantic relationships. Routine oral care and marital counselling produced better oral health status, and an enhanced marital life eight weeks after intervention.

**INTRODUCTION**

Health is highly influenced by social factors and is critical to life fulfilment and productivity.[1] According to the constitution of the World Health Organisation (1948), health is defined as a complete state of physical, mental and social well-being and not the mere absence of illness and diseases.[2,3] Therefore, the determinants of health are multifactorial, commonly affected by physical, mental, and social factors. Marital status and quality of marriages are powerful social factors affecting health.[4]Scientific reports have shown that married people and especially those with good lquality of marriages show signs of better health since marriage provides a strong social network that shape physical and mental health.[4]

Marriage quality is defined as a subjective global evaluation of how partners relate in a relationship; it is a product of self-reported altitude of the partners in the relationship and marriage, and assessing the individuals acceptability of the partners behaviour or both.[5, 6] Reasons for better health among married individuals include economic benefit, emotional help, and mental support during health challenges. Other reasons include assistance to comply with health instructions, persistent concerns and mutual respect for each other.[4]Reports have it that many men tend to stop anti health social habits such as smoking and risky behaviours after getting married as a sign of respect for their wives and to be able to satisfy their wives.[7]Conversely, marriage also comes with health challenges: health implications of hormonal changes during pregnancy (e.g. pregnancy epulis), prolonged period of psychosocial stress from unresolved conflicts, and cardiovascular diseases have been documented.[4]Good quality marriages bring happiness and peace of mind. Individuals are therefore free from depression, chronic mental stress, oxidative stress and internalising problems, as they enjoy longevity of life, quick recovery from illnesses and excellent metabolic control of Type I Diabetic mellitus.[8]

Hormonal changes in women is a critical factor that affect their physiology and the effects are increased during puberty, menstruation, pregnancy and menopause. The effects are not limited to the reproductive system, but also affect the oral and maxillofacial region which is often neglected.[4,6]Oral problems may result from the effects of prolonged mental stress, hormonal imbalance, medications, and as manifestations of the associated systemic diseases.[9] Like systemic health effects, oral problems are more prevalent among those with bad quality of marriages. The common oral lesions are periodontitis, xerostomia, and temporomandibular joint pain, burning mouth syndrome, atypical odontalgia, and delusional halitosis. Consequently, oral

lesions affect the quality of life of affected individuals, and impair their productivity and social behaviour in the community.

Religion plays major roles in social behaviour and it is a strong factor that determines the viability of physical and mental health.[10] Church worshippers cast their burden on the supreme God they believe, and, in many cases, exhibit reduced stress of life. Also, their strong belief make them to accept marriage when it is better or/and when there are challenges, and subsequently, they show lesser signs of psychopathy from home challenges, although the mechanism remains unclear.[11] Religious counselling generally helps believers in relieving mental stress and achieving general and oral health. However, data relating oral problems with the combined effects of religious counselling and dental intervention for married women have not been reported among the African population.

This study was therefore designed to investigate the effects of dental intervention and religious counselling among married female church worshippers in a south-western Nigerian population, and to compare the burden of the oral problems before and after the intervention. Data generated from this study supplied information on oral needs among married women, and justification for the need for special attention on oral health care of married women with a view to preventing more devastating oral complications in the population.

## MATERIALS AND METHODS

This was a longitudinal study showing the relationship between qualities of marriages, oral health care and marital counselling among married female worshippers attending religious worship centres (RWC) in a South Western city of Nigeria. The study was conducted in a capital city of a south-western state in Nigeria. The surface area of the city is 47km$^2$ with a population of 395,500 people. As reported by Lucchettiet al[11], dwellers are affected by religious activities. Study participants were consecutive, consented, married women volunteers who attend selected religious worship centres in the chosen city.

Permission to carry out the study was sought and obtained from the ethical committee of the institution. Each participant also gave their consent before recruitment into the study. Patients' information was handled with respect and utmost confidentiality. All the major RWCs domiciled in each of the local government areas in the city were identified and their leaders were contacted to seek permission to conduct the research in their respective centres. The centres where the leaders gave positive consent were collated in each local government area. Simple random sampling technique was used to select one RWC from each of the five major local government areas in the city. A total of five RWCs from five local government area were thus selected. All consecutive consenting married women in the selected RWSs were recruited into this study.

Included in the study were all consented, married, apparently healthy women with no sign of mental diseases or chronic medical or emotional stress. Participants with debilitating underlying systemic conditions such as movement disorders, hypertension, diabetes, and mental disorders were excluded. Also excluded were women on oral contraceptives or hormonal therapy and young ladies who were forced into marriage.

Data were collected using structured questionnaires which were administered by the researcher to the participants after obtaining their consent. The first part of the questionnaire (Section 1) was used to collect information about participants' bio data such as name, church of worship, age, address, ethnicity, marital status, and present occupation. In section two (2), participants were asked questions on the quality of their marriages and the

relationship between them and their respective spouses.

Sections 3 records clinical oral examination findings. The participants were gathered in the worship hall in the respective RWCs where interactive seminars on oral health education and the importance of maintaining happy homes were explained to the participants by the researcher.

**Examination of the patients**

Each participants was made to relax and sit down comfortably on a consulting chair for oral examination. Extra oral examination was done by checking for facial asymmetry, facial swellings, temporomandibular joint and checking for integrity of submandibular nymph nodes. Intra oral examination was performed by asking the patient to gently open the mouth for oral examinations as follows: inspection of the oral mucosa was done to check for colour, swelling, discharge, appearance, evidence of or dryness and presence of ulcers on the mucosa was done under natural light. Oral hygiene was assessed with the oral hygiene index.

The presence or the absence of halitosis was assessed by using organoleptic method. No odour was scored 0, mild malodour scored 1, mild malodour scored 2, and moderate malodour 3 and severe malodour scored 4. Candidates with scores 2 and above were marked present for halitosis. Gingival health status was assessed using gingival index Loe and Silness[12]while periodontitis was checked for by assessing tooth mobility of the teeth with digital manual palpation method and by measuring the established pocket. Those with periodontal pockets of more than 3 mm depth were marked positive with periodontitis. Xerostomia was diagnosed based on patients' subjective feeling of oral dryness, and any presence of at least one of the following signs: loss of shinning appearance of the oral mucosa, presence of ropy saliva, loss of salivary bubbles at the floor of the mouth, and reduced saliva flow follow external stimulation of parotid gland. The findings were recorded accordingly.

**Assessment of Quality of Marriages**

Quality of marriage was assessed by obtaining self-reported data on how best the women assessed the altitude and behaviour of their husbands towards them on various aspects such as finance, emotional support, companionship, sex life, and religious support as reported by Finchamet al[5]. The women were asked to give overall ratings of their husbands in any of the following four categories: poor, fair, good and excellent. The information was collected with strict confidentiality in a conducive environment by the author.

For the purpose of this study, those who rated the overall relationship with their husbands as poor and fair were regarded as **poor** quality of marriage and those who rated their relationship as good and excellent were taken as **good** quality of marriage.

**INTERVENTIONS**

**HEALTH EDUCATION**: After oral examinations, all participants were actively motivated to make keeping good oral hygiene a priority for them and every member of their family. Tooth cleaning packages were freely distributed to them and their compliance with instructions was monitored via phone calls. They were also taught tooth brushing techniques, use of dental floss, good diets for maintaining good oral health, and general skills on how to recognize and provide home care for common oral problems.

**SCALING AND POLISHING**: All participants were conveyed to the dental hospital in the state where scaling and polishing was done for all participants. .

**TREATMENT OF SPECIFIC ORAL PROBLEMS**: Specific oral problems that

were clinically diagnosed were treated, and those requiring operative procedures were referred to nearby standard dental hospitals. Xerostomia was treated with frequent oral sips of water and regular lime water 0.1% oral rinse twice daily, for a week. Halitosis was treated with scaling and polishing, warm saline mouth bath, and referral to Oral Medicine Clinic in the nearby hospital. Candidiasis was treated with Nystatin lozenges (pastilles) given three times daily.TMJ pain was treated with jaw rest, tabs nolgesic 2 tabs 8 hourly for a week and tabs lexotan 1.5 mg for 3 days

**MARITAL COUNSELLING**

Interactive sessions of marital counselling were privately conducted for all participants by the researcher. The counselling was designed to be in strong agreement with their respective religious beliefs and faith. They were made to see reasons why they should continually strive to be at peace with their spouses using their holy book as the practical guide. Health benefits of good quality marriages were also explained to them in clear terms.

**REVIEW AFTER INITIAL INTERVENTION**

Review was done weekly via telephone calls, during which they were asked about the symptoms and relationship with their spouses. At the eighth week after the initial visit, patients were physically visited at the same worship centre and were reviewed. Oral examinations as was earlier done on the first physical visit was also done and the findings recorded in section 4 of the questionnaire, some patients were however, unable to get to this stage, they were lost to follow up.

**DATA ANALYSIS:**

Data were analysed using STATA 16 statistical software (StataCorp, College Station, Texas). Percentages and proportions were used to describe qualitative variables, such as the distribution of participants with specific oral and dental problem before and after intervention. Other qualitative variables that were analysed with frequency are: occupation, age group and marital status. The only continuous variable was age, which was analysed using mean, median, mode, and standard deviation. Comparison of frequency of oral lesions before and after intervention in different age groups and in those with good and bad quality of marriage was done using t test. Statistical significance was set at $p < 0.05$.

**RESULTS**

A total of 130 married women were recruited into the study at the first visit;17 participants were lost to follow up, therefore, complete data of only 113 participants who were available for the second visit were analysed. Of the 113 participants, 81 (71.7%) had good quality of marriage while 32 (28.3) had poor quality of marriage using the criteria stated in the Materials and Methods section.

**Socio-demographic and health-seeking behaviour of the of respondents**

The mean age of participants was 57.9, SD=12.8, and more than one-third (41, 36.6%)were in their fifth decade. About a third of participants (6, 30%) within that age bracket had poor quality of marital relationship. Majority (101, 92%) presently reside with their husbands, 2(2%) are divorced, and 7 (6.2%) widowed. About one-third, 16 (30.5%), of the self-employed participants had poor quality of marriage, closely followed by civil servants (11, 28.2%). Most of those with poor quality of marriages had not checked their blood pressure, weight nor their blood sugar in the last six months. However, the differences are not statistically significant: blood pressure check (p=1.000), weight check (0.517) and blood sugar check (0.214). Also, 10.7% % of all participants had never had dental check-up. (Table 1)

**Table 1: Socio-demography of Respondents**

| Characteristics | Good quality Marriage | Poor quality Marriage | Total (%) | P value |
|---|---|---|---|---|
| Age Group (Mean age 57.9 SD 12.8) | 1 (50) | 1 (50) | 2 (1.3) | 0.533 |
| 21-30 | 5 (83.3) | 1 (16.7) | 6 (5.3) | |
| 31-40 | 14 (70) | 6 (30) | 20 (17.7) | |
| 41-50 | 26 (89.3) | 15 (10.7) | 41 (36.3) | |
| 51-60 | 23 (82.1) | 5 (17.9) | 28 (24.8) | |
| 61-70 | 12 (75 | 4 (25) | 16 (14.2) | |
| >70 | | | | |
| Marital status | | | | |
| Married | 76 (73.1) | 28 (26.9) | 104 (92) | 0.338 |
| Divorced | 0 (0) | 2 (100) | 2 (1.8) | |
| Widow | 4 (57.1) | 3 (42.9) | 7 (6.2) | |
| Occupation | | | | |
| Civil Servant | 28 (71.8) | 11 (28.2) | 39 (34.5) | 0.742 |
| Self employed | 41 (69.5) | 16 (30.5) | 59 (50.5) | |
| Retired | 6 (60) | 4 (40) | 10 (8.9) | |
| Dependent | 1 (14.3) | 6 (85.7) | 7 (6.1) | |
| Blood pressure check | | | | |
| <6 month | 29 (72.5) | 11 (27.5) | 40 (35.40) | 1.000 |
| >6 month | 48 (71.6) | 19 (28.4 | 67 (59.3) | |
| Can't remember | 4 (66.7) | 2 (33.3) | 6 (5.3) | |
| Blood sugar check | | | | |
| <6 month | 16 (76.2) | 5 (23.8) | 21 (18.6) | 0.517 |
| >6 month | 32 (76.2) | 10 (23.8) | 42 (37.2) | |
| | 33 (66) | 17 (34) | 50 (44.3) | |
| Can't remember | | | | |
| Weight check | | | | 0.214 |
| <6 month | 48 (72.7) | 18 (27.3) | 66 (58.4) | |
| >6 month | 30 (75) | 10 (25) | 40 (35.4) | |
| | 3 (42.9) | 4 (57.1) | 7 (6.2) | |
| Can't remember | | | | |
| Have you ever a dental check-up? | 8 (66.2) | 4 (33.3) | 12 (10.7) | 0.001* |
| Yes | 73 (72.3) | 28 (27.7) | 101 (89.3) | |
| No | | | | |

Fischer's exalt. * Statistically significant

**Prevalence of Systemic Diseases among Participants**

More than one third of all the participants (41, 36.3%) were known hypertensive patients, while 17 (15.1%) were known diabetes mellitus patients. Furthermore, more than two-third of subjects with poor quality of marriage were known hypertensive patients (20, 62.5%, n=32) while 6 (18.6%, n=32) were patients with diabetes mellitus. Only 1(13.7%, n=81) of all patients with good quality of marriage had diabetes mellitus. (Fig 1).

**Fig 1: Prevalence of Systemic Diseases among the Participants**

### Objective rating of Participants' Spouses

More than half of the participants (52%) rated their husbands' attitude towards them as good, 38 % rated the attitude as poor and 31% of participants rated the attitude of their husbands towards them as excellent. (Fig 2)

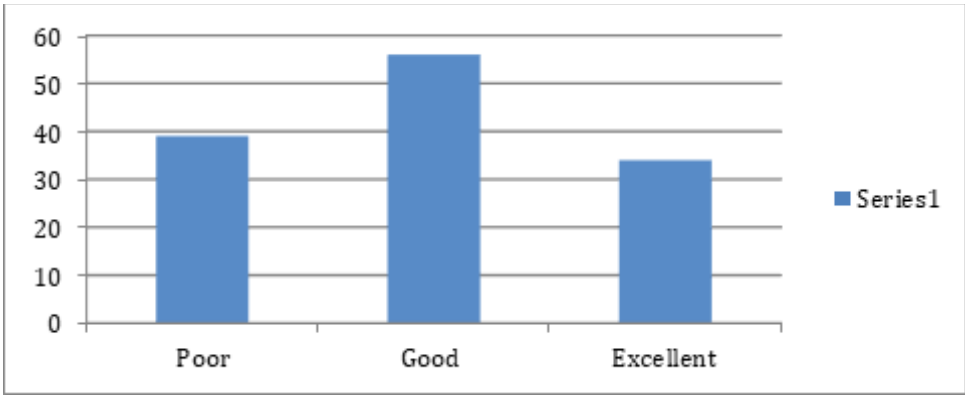


**Fig 2: Participants' Subjective Rating of Their Spouses' Attitude towards Them**

**Table 2: Participants' subjective Rating of the Relationship with their Spouses**

| Question | Frequency (%) |
|---|---|
| Does your husband spend enough time with you at hom | |
| No | 49 (43.5%)) |
| Yes | 64 (56.6) |
| Are you enjoying your marriage? | |
| No | 34 (30.1) |
| Yes | 79 (69.9) |
| Do you think your husband is hiding something from yo | |
| Yes | 48 (42.5) |
| No | 65 (57.5) |
| Do you prefer to stay alone if you have the option now? | |
| Yes | 32 (28.3) |
| No | 81 (71.7) |

### Relationship between Prevalence of Oral Lesions, social activities and Quality of marriage before intervention

Oral lesions were statistically significantly higher among participants with poor quality of marriage. Periodontitis was the most frequent lesion (p=0.001), followed by orofacial pain (p=0.001), bleeding gum (p=0.001), mouth odour (p=0.004), xerostomia (p=0.001) and taste impairment (p=0.001). Extra marital relationship was also more prevalent among those with poor quality of marriage (p=001). Table 3

**Table 3: Relationship between Prevalence of Oral Lesions, social activities and Quality of marriage before intervention**

| | Participants with Good Quality of Marriage | Participants with Poor Quality of Marriage | Total | P value |
|---|---|---|---|---|
| Symptoms | Frequency/% | Frequency/% | Frequency/% | |
| Mouth odour | | | | |
| Present | 10 (45.5) | 12 (54.6) | 22 (100) | 0.004* |
| Absent | 71 (78.0) | 20 (21.98) | 91 (100) | |
| Bleeding on Brushing | | | | 0.001* |
| Present | 10 (41.7) | 14 (58.3) | 24 (100) | |
| Absent | 71 (79.8) | 18 (20.2) | 89 (100) | |
| Mobile teeth/periodontitis | | | | 0.0001* |
| Present | 13 (43.3) | 17 (56.7) | 30 (100) | |
| Absent | 68 (81.5) | 93 (15.1) | 83 (100) | |
| Orofacial Pain | | | | 0.001* |
| Present | 13 (48.2) | 14 (51.9) | 27 (100) | |
| Absent | 68(79.1) | 18 (20.9) | 86 (100) | |
| Taste impairment | | | | 0.001* |
| Present | 7 (35%) | 13 (65) | 20 (100) | |
| Absent | 74 (79.6%) | 19 (20.4) | 93 (100) | |
| Xerostomia | | | | 0.001* |
| Present | 11 (44) | 14 (56%) | 25 (100) | |
| Absent | 70 (79.5) | 18 (20.5) | 88 | |
| Dental caries | | | | 0.001* |
| Present | 12 (48) | 13 (52) | 25 (100) | |
| Absent | 69 (61.1) | 19 (38.9) | 88 9100) | |
| Extra marital relationship | 1 (5.56) | 17 (94.4) | 18 (100) | 0.0001* |
| Present | 80 (84.2) | 15 (15.8) | 95 (100) | |
| Absent | | | | |

**Prevalence of Oral Symptoms and associated Behavioural changes among Participants before and After Intervention.**

Periodontitis was the most frequent oral problem before intervention (30, 26.5%), followed by bleeding gums during tooth brushing (24, 20.3%), mouth odour (22, 19.4%, dental**/**orofacial pain (27, 23.9%), and taste impairment 20 (17.6%). Also 17 (15%) of all participants had extra marital relationships before intervention. After the intervention, there were significant reduction in frequency of oral symptoms (periodontitis, p=0/001, mouth odour p=0.001, xerostomia, p=0.001 and bleeding gum, p=0.001) and extra marital relationships (p=0.001) (Table 4).

**Table 4: Prevalence of Oral Symptoms and behavioural changes among study Participants Before and after intervention**

| | Before intervention | After intervention | P value |
|---|---|---|---|
| **Symptoms** | **Frequency(%)** | **Frequency(%)** | |
| Mouth odour | | | **0.004*** |
| Present | **22 (19.4)** | **5 (4.4)** | |
| Absent | **91 (80.5)** | **108 (95.6)** | |
| Bleeding on Brushing | | | **0.204** |
| Present | **24 (20.3)** | **1 (0.8)** | |
| Absent | **89 (79.7)** | **112 (99.2)** | |
| Mobile teeth/periodontitis | | | **0.001*** |
| Present | **30 (26.5)** | **14 (12.4)** | |
| Absent | **83 (73.5)** | **99 (87.6)** | |
| Orofacial Pain | | | **0.055** |
| Present | **27 (23.9)** | **2 (1.8)** | |
| Absent | **86 (76.1)** | **111 (98.2)** | |
| Taste impairment | | | **0.0001*** |
| Present | **20 (17.6)** | **12 (10.6)** | |
| Absent | **93 (82.3)** | **101 (89.4)** | |
| Xerostomia | | | **0.0001*** |
| Present | **25 (22.1)** | **6 (5.3)** | |
| Absent | **88 (77.9)** | **107 (94.7)** | |
| Dental Caries | | | **0.047*** |
| Present | **12 (10.7)** | **2 (1.8)** | |
| Absent | **69 (89.4)** | **111 (98.2)** | |
| Extra marital relationship | | | |
| Present | **18 (15.9%)** | **2 (1.8)** | **0.024*** |
| Absent | **95 (84.1%)** | **111 (98.2)** | |

ttest * statistically significant

**Oral Hygiene status of participants before and after Intervention**

Majority of the participants had good oral hygiene at the start of the study; only 14 (12.3) had poor oral hygiene. After the intervention, the percentage of those with good oral hygiene increased to 93.8% while those with poor oral hygiene significantly reduced to only 2.7% (Table 5).

**Table 5: Oral Hygiene status of participants before and after Intervention**

| Oral Hygiene Status | Before Intervention (%) | After Intervention (%) |
|---|---|---|
| Good | 81 (71.6) | 106 (93.8) |
| Fair | 18 (15.9) | 5 (4.5) |
| Poor | 14 (12.3) | 3 (2.7) |

P<0.001

**Relationship between age, oral symptoms and extra marital romantic relationships**

Majority of participants involved in extra marital relationships were divorced women in their fifth and sixth decade of life. Prevalence of oral lesions was significantly higher among those women in extra marital relationships than those who were not, and common lesions were xerostomia (83.7%), halitosis (61.1%) and periodontitis (55.6%). (Table 6)

**Table 6: Relationship between age, Oral symptoms and extra marital romantic relationship**

| Variable | Extra marital romantic relationship (% | P value |
|---|---|---|
| Age group | | 0.037* |
| 21-30 | 0(0) | |
| 31-40 | 1 (5.6) | |
| 41-50 | 6 (33.3) | |
| 51-60 | 8(44.3) | |
| 60 | 3 (3) | |
| Marital status | | 0.654 |
| Married | 5 (27.7) | |
| Divorced | 11 (61.1) | |
| Widowed | 2 (11.1) | |
| Xerostomia | | |
| Present | 15 (83.7) | 0.001* |
| Absent | 3 (17.7) | |
| Halitosis | | |
| Present | 11 (61.1) | 0.001* |
| Absent | 7 (38.9) | |
| Periodontitis | | |
| Present | 10 (55.6) | 0.003* |
| Absent | 8 (44.4) | |
| Oral Hygiene status | | 0.004* |
| Good | 10 (55.6) | |
| Fair | 1 (5.6) | |
| Poor | 7 (38.9) | |

Fisher's exact, * statistically significant

## DISCUSSION

This study was conducted among married female religious worshippers in a southwestern Nigerian state to determine the relationship between quality of marriages and pattern of presentation of oral lesions before and after professional intervention. In the present study, the mean age of the participants (married women) was 57.9 years and most of them were in their six decade of life. This result is at variance with the report of Omodeyi et al that showed age range of married females in the Nigerian population as 10-19 years.[13] Parity is a descrete indicator of motherhood and marriage, Oziegbe *et al* studied the relationship between parity among women and oral problems, they reported parity (motherhood) among 13 years old girls in Northern Nigeria.[14] Unlike Omodey *et al* and Oziegbe *et al*s' researches, the present study was conducted in southern Nigeria where early marriage is not encouraged, and most females are exposed to western education early in life.[15] Also, women who were forced into marriage by circumstances were also excluded from this study. Marriage provides a strong social network for health promotion and recovery from illnesses. Thus, good health behaviours have been reported to be better among the participnats with good, quality marital relationships.

Majority of particpants who have not checked their blood pressure, weight, and/or had a dental check up in the last six months are those with poor-quality,old marriages. In addition to the fact that health education is still groslly deficient in Nigeria, females with poor quality of marriage are under intense pressure whichtends to take their attention away from their immediate health needs.[4]Also, the economic situation and access to health facilities may play

some roles. At variance with this study is a Japanese study that reported improved access to oral health care among the married because of the strong social networks provided by the their spouses.[16]This study showed that poor quality of marriage is most frequent among self-employed married women in their fifth decade of life. This is in agreement to anAmerican study which reported that self - employed females have challenges coping with their families and tend to have marital issues.[17] They are also less dependent on their husbands, and are always deficient in spending quality time to satisfy their husbands. Some of them are also being lured into having extra marital affairs in their work places. They, however, offer great assistance for home support.[17]

Poor quality of homes has profound effects on physical health. The associated emotional and chronic stress play critical roles in the pathogenesis of some systemic diseases, such as cardiovascular diseases.[6]In this study, more than two-third (62.5%) of patients with poor quality of marriages are hypertensive patients. Marital challenges canalso lead to cardiovascularproblems which, if not properly managed, can lead to loss of life. As found in this study, about 20% of patients with poor quality of marriage are known diabetes mellitus patients, a value that was higher than those with good quality of marriage. Emotional support, and financial surport for those with good homes have been reported to contribute to better health of those in good quality marriages.[6]

In this study, common oral lesions seen were peridontitis (30,26.5%), bleeding while brushing (24,20.3%), orofacial pain/TMJ disorders (30, 26.5%), xerostomia (25. 22.5%), and taste impairmement (27, 23.9%). Unlike Oziegbe et al study that reported a dental caries pravalence of 41.11% among married women in Northern part of Nigeria,[14] only 10.7% of the women in this study had dental caries. This may be due to differences in the environment, genetic factors, and types of local food consumption.[18]This study showed that the prevalence of oral lesions are higher among those with poor quality of marriages when compared to those with goodmarital relationship.[16]

Oral lesions can occur due to the presence of chronic stress, emotional imbalance, poor dental hygiene, poor accessibility to dental care and finacial constrains.[5]Emotional factors modulate neuronal and hormonal influences on the production of neurotransmitters, which play vital roles in the pathogenesis of some oral diseases such as TMJ pain, taste impairement, xerostomia, and halitosis. These oral lesions are significantly more prevalent among those with poor quality of marriages and is consistent with scientific studies.[4,6] The higher prevalence of these oral conditions recorded among those with poor quality of marriages may be due to the effects of cummulative chronic stress, reduced assesibility to care, lack of home support for health care and mental psychopathy among the participants.[16]Persistent emotional stress, a consistent feature of spouses in poor marital relationships, is also associated with mental disoders, hormonal imbalance, abnormal salivary gland function, and developemt of pathogenic pain.[19]Relationship between stress and immune supression has been long estalished in the literature, as stress mediators easily pass through the blood-brain barrier to inactivate immune cells.[20]Stress causes physical diseases by interfering with physiological pathways in the amygdala, the hypothalamus, and the brainstem.[21]

The relationship between a husband and a wife is dynamic and it provides the much needed social networking for the assessment and affordability of health needs.[4]The quality of their marriage is generally measured by self reported subjective discription of the altitudes of

sposuses to each other.[5]In the present study, almost half of the partcipants (43.5%) reported that their spouses do not spend quality time at home, and 34 (30.1%) were not enjoying their marriage to the level they desired.In addition, 32 (28.3%) preferred to always be alone without their husbands if permitted. Thismay result from the fact that men are constantly exposed to more work load in the recent times and are becoming more engaged at work while trying to make ends meet due to the impaired economy in the country.[22]

The bi-directional relationship between oral and systemic health has been well documented.[23, 24]The management of oral problems has been widely reported to assist in allieviating systemic diseases such as chronic kidney diseases, diabetic mellitus, and patients with high Prostatic Surface Antigen (PSA) concentration.[23,25]In this study, after intervention which involved health education, counselling and management of identified oral lesions, there iwas significant reduction of oral lesions and extra marital involvement of participants. The prevalence of mouth odour, orofacial/TMJ pain bleeding on brushing and xerostomia as evaluated with normative assessment were reduced by 77%, 93%, 96 and 76% respectively after intervention.

Health education and moltivation are viable adjuncts to the succesful treatment of oral and systemic diseases.[26]When patientscomply with oral hygiene instructions and are encouraged on the intake of oral health improving foods, their oral health status becomes better. This was also observed in this study where the proportion of participants with good oral hygiene significantly increased by 30% after intervention. Total compliance with oral health instructions not only prevents oral diseases, but also improves general body physiology and enhance productivity.[27]The presence of sound oral health reduces inflammtaory mediatiors in the systemic circulation and impairs the patrhogenesis of some systemic problems such as cardiovascular diseases, chronic kidney diseases, and diabetes mellitus.[28]The present study showed a significant reduction in the percentage of married women with poor quality of marriage after oral health intervention. This finding further stresses the need for proper oral health education during pre marital marriage counselling as reported by Fazli *et al*.[29]

Intimacy enhancing interventions, in addition to practical efforts at maintaing good oral health status, is therefore crucial to having a good, quality marriage.[30]The above instructions constitute a major part of the marital counselling package that was offered to married women in this study which fetched a significant reduction of poor quality of marriag relationship among married women by 88.9%. This is a descrete pointer to the roles of good oral health care as a potential tool for having good marriages, families, and societies at large.

## CONCLUSION

There was a significant positive correlation between quality of marriages and oral health lesions in this study with significant alleviation intervention evidenced by 77%, 93%, 96%, and 76% reduction of mouth odour, orofacial/TMJ pain disorders, bleeding on brushing, and xerostomia respectively.

Self--employed women in their fifth decade of life showed the highest tendency to develop poor quality of marriages but specific interventions comprising of provision of good oral health care and marital counselling, significantly improved oral health status and their quality of marriage by 88.9%.

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