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# Determinants Of Oral Hygiene Practice Among Pregnant Women In Rivers East Senatorial District

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## ABSTRACT

Poor oral hygiene could be detrimental to health and certain factors could determine the practice of oral hygiene among pregnant women. This study investigated the determinants of oral hygiene practice among pregnant women in Rivers East Senatorial District, Rivers State. A descriptive correlational design was adopted with a population which consisted of one hundred and seven thousand nine, hundred and thirty-eight antenatal mothers (107, 938) mothers in Rivers East Senatorial District. A sample size of 880 was selected using a multistage sampling procedure. self-structured questionnaire titled “Practice of Oral Health Questionnaire (POHQ)” with a reliability index of 0.79. Data was analyzed using mean, standard deviation and Pearson Correlation 0.05 significance level with the aid of Statistical Product Service Solution version 27.0. The finding of the study showed that the extent of practice of oral hygiene was high ( $2.70 \pm 1.07$ ), and high extent of practice was more among those aged 40-49 years ( $\bar{X} = 2.76 \pm 0.85$ ), among those with tertiary education ( $\bar{X} = 2.77 \pm 0.79$ ), Christians ( $\bar{X} = 2.74 \pm 0.85$ ), and among those with 7-9 children ( $\bar{X} = 2.79 \pm 0.87$ ). Statistically significant relationship was found between practice of oral hygiene and age ( $n = 821$ ,  $r = 0.12$ ,  $p = 0.00$ ), education ( $n = 821$ ,  $r = 0.23$ ,  $p = 0.00$ ), and religious affiliation ( $n = 821$ ,  $r = 0.41$ ,  $p = 0.00$ ). It is concluded that the determinants of practices of oral hygiene among pregnant women in Rivers East Senatorial District were: age of women, educational status, religious affiliation and parity. Generally, the practice of oral hygiene was good. However, poor practice was found for use of floss after eating, visiting dentist when necessary to scale or clean the teeth and routine dental check-up. Thus, the study recommended that, healthcare workers should as a matter of necessity, make oral health programmes as part of prenatal care for pregnant women.

**Keywords:** Determinants, Hygiene, Oral, Pregnant Women, Rivers East.

## INTRODUCTION

The importance of oral hygiene extends beyond aesthetics and fresh breath; it plays a crucial role in preventing periodontal diseases such as gingivitis and periodontitis. Oral hygiene refers to the practice of maintaining the cleanliness of the mouth, teeth, and gums to prevent dental diseases and ensure overall well-being. Proper oral hygiene involves regular brushing, flossing, and the use of antiseptic mouthwash to remove plaque and food particles that accumulate in the oral cavity (Clark & Roberts, 2021). Poor oral hygiene during pregnancy can lead to prenatal oral conditions which may have adverse consequences for the child. Periodontitis is associated with preterm birth and low birth weight, and high levels of cariogenic bacteria in mothers can lead to increased dental caries in the infant. Other oral lesions, such as gingivitis and pregnancy tumors, are benign and require only reassurance and monitoring (Jones et al., 2020). Every pregnant woman should be screened. Regular dental visits help in early detection and treatment of these conditions, reducing the risk of severe complications.

Oral hygiene practices should be incorporated into daily routines, with emphasis on proper techniques for brushing and flossing. The American Dental Association (ADA) recommends brushing teeth at least twice a day using fluoride toothpaste and replacing toothbrushes every three to four months (ADA, 2022). Flossing once a day helps in removing food particles and plaque between teeth, preventing cavities and gum infections. Additionally, using mouthwash containing antibacterial properties further reduces the presence of harmful microbes in the oral cavity (Johnson et al., 2023). Certain factors could determine the practice of oral hygiene among pregnant women. Determinants as used in this study are factors which could be linked to oral hygiene. Oral health among pregnant women is influenced by various factors, including educational background, socioeconomic status, and access to healthcare information. A study by Johnson et al. (2022) found that pregnant women with higher levels of education were more likely to understand the significance of oral hygiene and seek preventive dental care. However, those from lower-income backgrounds or with limited access to healthcare services were less informed about the risks associated with poor oral hygiene during pregnancy. This practice gap often results in delayed treatment of oral health issues, which can contribute to adverse pregnancy outcomes, such as preterm birth and low birth weight (Martinez et al., 2020). Therefore, targeted health education programs are necessary to bridge this gap and improve oral health awareness among expectant mothers. One of the major barriers to proper oral hygiene among pregnant women is the prevalence of myths and misconceptions surrounding dental treatments during pregnancy. Many women believe that dental procedures, including routine cleanings and treatments, can harm the developing fetus, leading to avoidance of necessary dental care (Clark & Roberts, 2021). However, the American College of Obstetricians and Gynecologists (ACOG, 2022) has stated that preventive and restorative dental treatments are safe during pregnancy and can help reduce the risk of pregnancy-related complications.

Pregnant women are particularly susceptible to oral health problems due to the physiological changes that occur during pregnancy, including hormonal fluctuations that can affect the gums, teeth, and overall oral health. These changes increase the risk of conditions such as gingivitis, cavities, and periodontal disease, which can have detrimental effects not only on the mother's health but also on pregnancy outcomes, such as preterm birth, low birth weight, and preeclampsia. Despite the increased risks, many pregnant women continue to overlook the importance of oral hygiene, often leading to poor oral health outcomes.

In Rivers East Senatorial District, personal observation shows that some pregnant women are more concerned about the pregnancy and delivery with little or no attention on their oral hygiene. In Rivers East, oral health practice has been a major problem that leads to bad breath, swollen gum, cysts, tooth decay and sensitivity among others. The poor oral hygiene and oral health problems observed among women could be due to unfavorable attitude towards oral hygiene. Over the years, nothing has been done to unravel the cause of oral health problems suffered by pregnant women which calls for major concern for this study. Hence, the study sought identify the determinants of oral hygiene practice among pregnant women in Rivers East Senatorial District, Rivers State.

The following research questions were established for this study

1. What is the extent of practice of oral hygiene among pregnant women in Rivers East Senatorial District?
2. What is the extent of practice of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State based on age of women?
3. What is the extent of practice of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State based on educational status?
4. What is the extent of practice of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State based on religious affiliation?
5. What is the extent of practice of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State based on parity?

**METHODOLOGY**

A descriptive correlational design was adopted with a population which consisted of one hundred and seven thousand nine, hundred and thirty-eight antenatal mothers (107, 938) mothers in Rivers East Senatorial District. A sample size of 880 was selected using a multistage sampling procedure. self-structured questionnaire titled “Attitude and Practice of Oral Health Questionnaire (APOHQ)” with a reliability index of 0.79. The instrument was made of three sections A, and B. Section A; provided the socio-demographic data of pregnant mothers such as maternal age, educational level, marital status, belief system, level of education, and socioeconomic status, while section B focused on practices of oral hygiene among pregnant women, keyed with a modified four-point scale 4-Always, 3-Sometimes, 2-Rarely and 1-Never as response items. Data was analyzed using mean, standard deviation and Pearson Correlation 0.05 significance level with the aid of Statistical Product Service Solution version 27.0.

**RESULTS**

The results of the study are shown below:

**Table 1: Mean and Standard Deviation showing the extent of practice of oral hygiene among pregnant women in Rivers East Senatorial District**

SN	Items	$\bar{X}$	SD	Remark
1	Brushed at least twice a day	3.24	0.86	High extent
2	Rinsed mouth after eating something	3.03	1.01	High extent
3	Preferred the use of floss after eating	2.21	1.11	Low extent
4	Visited the dentist when necessary to scale or clean teeth	2.18	1.11	Low extent
5	Preferred the use of fluoride toothpaste	3.38	0.84	High extent
6	Licked menthol tablet to freshen my mouth	3.08	0.90	High extent
7	Used toothpick after eating sticky food	3.00	1.08	High extent
8	Ate in-between meals and do not bother to clean the teeth	2.44	1.26	Low extent
9	The teeth is very strong it was used to open cap of bottled drink	2.38	1.29	Low extent
10	Does routine dental check-up	2.07	1.28	Low extent
	<b>Grand</b>	<b>2.70</b>	<b>1.07</b>	<b>High extent</b>

Criterion = 2.50. Guide: 0 - 1.49 = very low extent (VLE); 1.50 - 2.49 = low extent (LE); 2.50 – 3.49 = high extent (HE); 3.50 – 4.00 = very high extent (VHE)

Table 1 showed the extent of practice of oral hygiene among pregnant women in Rivers East Senatorial District. The result showed that the grand mean of 2.70±1.07 was greater than the criterion mean of 2.50, indicating a high extent of practice. Though, low extent was found in the use of floss after eating (2.21±1.11), visiting dentist when necessary to scale or clean the teeth (2.18±1.11), and routine dental check-up (2.07±1.28). Specifically, to a high the women brushed teeth at least twice a day (3.24±0.86) and rinsed mouth after eating something (3.03±1.01). Thus, the extent of practice of oral hygiene among pregnant women in Rivers East Senatorial District was high.

**Table 2: Mean and Standard Deviation showing age of respondents and practice of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State**

SN	Items	20-29yrs (N = 361)		30-39yrs (N = 305)		40-49yrs (N = 155)	
		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
1	Brushed at least twice a day	3.10	0.94	3.35	0.82	3.35	0.82
2	Rinsed mouth after eating something	2.91	1.10	3.00	0.85	3.32	0.85
3	Preferred the use of floss after eating	2.06	1.11	2.34	1.07	2.31	1.07
4	Visited the dentist when necessary to scale or clean teeth	1.98	0.96	2.40	0.90	2.19	0.95
5	Preferred the use of fluoride toothpaste	3.38	0.65	3.31	0.90	3.51	0.77

6	Licked menthol tablet to freshen my mouth	3.10	0.73	3.14	0.68	2.90	0.59
7	Used toothpick after eating sticky food	2.95	0.8	2.94	0.53	3.22	0.65
8	Ate in-between meals and do not bother to clean the teeth	2.66	0.74	2.16	0.81	2.46	0.89
9	The teeth is very strong it was used to open cap of bottled drink	2.63	0.92	2.31	0.90	1.90	0.995
10	Does routine dental check-up	1.91	0.94	2.06	1.06	2.45	1.00
<b>Grand</b>		<b>2.67</b>	<b>0.88</b>	<b>2.70</b>	<b>0.85</b>	<b>2.76</b>	<b>0.85</b>

Criterion mean = 2.50.

Table 2 revealed the extent of practice of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State based on age of women. The result showed that, all age category had high extent of practice but was more among those aged 440-49 years ( $\bar{X} = 2.76 \pm 0.85$ ) followed by those aged 30-39 years ( $\bar{X} = 2.70 \pm 0.85$ ), and those aged ( $\bar{X} = 2.67 \pm 0.88$ ). Thus, high extent of practice of oral hygiene among pregnant women was found more among older women.

**Table 3: Mean and Standard Deviation showing educational status of respondents and extent of practice of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State**

SN	Items	None (N = 115)		Primary (N = 72)		Secondary (N = 237)		Tertiary (N=397)	
		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
1	Brushed at least twice a day	3.21	1.03	2.55	0.96	2.96	0.96	3.54	0.54
2	Rinsed mouth after eating something	2.93	0.88	2.55	1.26	2.91	0.93	3.20	0.89
3	Preferred the use of floss after eating	1.86	1.11	1.44	1.18	1.73	1.14	2.74	1.04
4	Visited the dentist when necessary to scale or clean teeth	2.05	0.96	1.66	0.90	1.78	0.95	2.53	0.83
5	Preferred the use of fluoride toothpaste	3.41	0.65	3.22	0.90	3.27	0.77	3.46	0.61
6	Licked menthol tablet to freshen my mouth	2.85	0.73	3.55	0.68	3.27	0.59	2.94	0.62
7	Used toothpick after eating sticky food	3.15	0.80	3.55	0.53	3.12	0.65	2.78	0.64
8	Ate in-between meals and do not bother to clean the teeth	2.42	0.74	3.11	0.81	2.89	0.89	2.05	0.81
9	The teeth is very strong it was used to open cap of bottled drink	2.42	0.92	3.00	0.90	2.51	0.99	2.17	0.98
10	Does routine dental check-up	2.06	0.94	2.00	1.06	2.51	1.00	2.29	1.01
<b>Grand</b>		<b>2.63</b>	<b>0.87</b>	<b>2.66</b>	<b>0.91</b>	<b>2.69</b>	<b>0.88</b>	<b>2.77</b>	<b>0.79</b>

Criterion mean = 2.50.

Table 3 revealed the extent of practice of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State based on the educational status of women. The result showed that, all category of educational status had high extent of practice but more among those with tertiary education ( $\bar{X} = 2.77 \pm 0.79$ ) followed by those with secondary education ( $\bar{X} = 2.69 \pm 0.88$ ), and those with primary education ( $\bar{X} = 2.63 \pm 0.87$ ). Thus, high extent of practice of oral hygiene among pregnant women was found more among women with higher educational status.

**Table 4: Mean and Standard Deviation showing religious affiliation and practice of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State**

SN	Items	Christianity (N = 632)		Islam (N = 131)		Tradition (N = 58)	
		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
1	Brushed at least twice a day	3.41	0.72	2.88	0.93	2.13	0.99
2	Rinsed mouth after eating something	3.07	1.01	2.93	0.96	2.74	1.03
3	Preferred the use of floss after eating	2.43	1.11	1.64	1.18	1.13	1.14
4	Visited the dentist when necessary to scale or clean teeth	2.33	0.96	1.94	0.90	1.00	0.95
5	Preferred the use of fluoride toothpaste	3.50	0.65	3.18	0.90	2.53	0.77
6	Licked menthol tablet to freshen my mouth	2.97	0.73	3.23	0.68	3.86	0.59
7	Used toothpick after eating sticky food	2.91	0.8	3.23	0.53	3.44	0.65
8	Ate in-between meals and do not bother to clean the teeth	2.28	0.74	2.72	0.81	3.45	0.89
9	The teeth is very strong it was used to open cap of bottled drink	2.28	0.92	2.35	0.90	3.45	0.99
10	Does routine dental check-up	2.24	0.94	1.67	1.06	3.45	1.00
	<b>Grand</b>	<b>2.74</b>	<b>0.85</b>	<b>2.57</b>	<b>0.88</b>	<b>2.71</b>	<b>0.91</b>

Criterion mean = 2.50.

Table 4 revealed the extent of practice of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State based on religious affiliation of women. The result showed that, all category of religious affiliation has but it was more among the Christians ( $\bar{X} = 2.74 \pm 0.85$ ) followed by those Traditionists ( $\bar{X} = 2.71 \pm 0.91$ ), and Muslims ( $\bar{X} = 2.57 \pm 0.88$ ). Thus, good extent of practice towards oral hygiene among pregnant women was found more among Christian women.

**Table 5: Mean and Standard Deviation showing parity and practice of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State**

SN	Items	1-3 (N = 444)		4-6 (N = 311)		7-9 (N = 66)	
		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
1	Brushed at least twice a day	3.28	0.84	3.16	0.84	3.34	1.03
2	Rinsed mouth after eating something	3.09	1.06	2.81	1.06	3.50	0.71
3	Preferred the use of floss after eating	2.32	1.11	2.08	1.18	2.10	1.14
4	Visited the dentist when necessary to scale or clean teeth	2.11	0.96	2.28	0.90	2.11	0.95
5	Preferred the use of fluoride toothpaste	3.51	0.65	3.27	0.90	3.00	0.77
6	Licked menthol tablet to freshen my mouth	2.95	0.73	3.33	0.68	3.89	0.59
7	Used toothpick after eating sticky food	2.84	0.80	3.25	0.53	2.89	0.65
8	Ate in-between meals and do not bother to clean the teeth	2.43	0.74	2.41	0.81	2.62	0.89
9	The teeth is very strong it was used to open cap of bottled drink	2.41	0.92	2.38	0.90	2.15	0.995
10	Does routine dental check-up	2.04	0.94	2.03	1.06	2.34	1.00
	<b>Grand</b>	<b>2.69</b>	<b>0.87</b>	<b>2.70</b>	<b>0.88</b>	<b>2.79</b>	<b>0.87</b>

Criterion mean = 2.50

Table 5 revealed the practice of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State based on parity of women. The result showed that, all category of parity had high extent practice but it was more among those with 7-9 children ( $\bar{X} = 2.79 \pm 0.87$ ) followed by those with 4-6 children ( $\bar{X} = 2.70 \pm 0.88$ ), and 1-3 children ( $\bar{X} = 2.69 \pm 0.87$ ). Thus, practice of oral hygiene among pregnant women was found more among those with more children.

**Table 6: Pearson Correlations analysis showing relationship between age of women and practices of oral hygiene among pregnant women in Rivers East Senatorial District**

Variables		Practice	Age	Decision
<b>Practice</b>	Pearson correlation	1	0.12	H <sub>0</sub> rejected
	Sig.		0.00*	
	n	821	821	
<b>Age</b>	Pearson correlation	0.12	1	
	Sig.	0.00*		
	n	821	821	

**\*Significant; p<0.05**

Table 6 presents the Pearson Correlations analysis on relationship between age of women and practices of oral hygiene among pregnant women in Rivers East Senatorial District. The result revealed that there was a statistically significant relationship between age of women and practices of oral hygiene as  $p < 0.05$  ( $n = 821$ ,  $r = 0.12$ ,  $p = 0.00$ ). Thus, the null hypothesis which stated that there is no significant relationship between age of women and practices of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State was rejected.

**Table 7: Pearson Correlations analysis showing relationship between educational status and practices of oral hygiene among pregnant women in Rivers East Senatorial District**

Variables		Practice	Education	Decision
<b>Practice</b>	Pearson correlation	1	0.23	H <sub>0</sub> rejected
	Sig.		0.00*	
	n	821	821	
<b>Education</b>	Pearson correlation	0.23	1	
	Sig	0.00*		
	n	821	821	

**\*Significant; p<0.05**

Table 7 presents the Pearson Correlations analysis on relationship between educational status and practices of oral hygiene among pregnant women in Rivers East Senatorial District. The result revealed that there was a statistically significant relationship between educational status and practices of oral hygiene as  $p < 0.05$  ( $n = 821$ ,  $r = 0.23$ ,  $p = 0.00$ ). Thus, the null hypothesis which stated that there is no significant relationship between educational status and practices of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State was rejected.

**Table 8: Pearson Correlations analysis showing relationship between religious affiliation and practices of oral hygiene among pregnant women in Rivers East Senatorial District**

Variables		Practice	Religion	Decision
<b>Practice</b>	Pearson correlation	1	0.41	H <sub>0</sub> rejected
	Sig.		0.00*	
	n	821	821	
<b>Religion</b>	Pearson correlation	0.41	1	
	Sig	0.00*		
	n	821	821	

**\*Significant; p<0.05.**

Table 8 presents the Pearson Correlations analysis on relationship between religious affiliation and practices of oral hygiene among pregnant women in Rivers East Senatorial District. The result revealed that there was a statistically significant relationship between religious affiliation and practices of oral hygiene as  $p < 0.05$  ( $n = 821$ ,  $r = 0.41$ ,  $p = 0.00$ ). Thus, the null hypothesis which stated that there is no significant relationship between religious affiliation and practices of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State was rejected.

**Table 9: Pearson Correlations analysis showing relationship between parity and practices of oral hygiene among pregnant women in Rivers East Senatorial District**

Variables		Practice	Parity	Decision
<b>Practice</b>	Pearson correlation	1	0.02	H <sub>0</sub> not rejected
	Sig.		0.47*	
	n	821	821	
<b>Parity</b>	Pearson correlation	0.02	1	
	Sig	0.47*		
	n	821	821	

**\*Not Significant; p>0.05**

Table 9 presents the Pearson Correlations analysis on relationship between parity and practices of oral hygiene among pregnant women in Rivers East Senatorial District. The result revealed that there was no statistically significant relationship between parity and practices of oral hygiene as  $p > 0.05$  ( $n = 821$ ,  $r = 0.02$ ,  $p = 0.47$ ). Thus, the null hypothesis which stated that there is no significant relationship between parity and practices of oral hygiene among pregnant women in Rivers East Senatorial District, Rivers State was not rejected.

## DISCUSSION OF FINDINGS

The findings of the study are discussed below:

The result of the study indicated that the extent of oral hygiene practice among pregnant women in Rivers East Senatorial District was high ( $2.70 \pm 1.07$ ). The finding of this study on the practice of oral hygiene was encouraging because it can contribute to better health among the women. The finding of

the study is in line with that of Wassihun et al. (2022) among pregnant mothers attending antenatal care at South Omo Zone public hospitals, Southern Ethiopia which showed good practice towards oral hygiene. The finding of this study is in consonance with that of Chinenye-Julius (2022) study on oral hygiene among pregnant women in Ogun State Nigeria which showed good practice towards oral hygiene among the women. The finding of this study gives credence to that of Bushehab et al. (2022) study on oral hygiene which showed good practice of oral hygiene among pregnant women. The result of this study is in consonance with that of Boggess et al. (2015) study on the oral hygiene practices and dental service utilization among pregnant women which showed good practice of oral hygiene. The similarity between the previous studies and the present one could be explained by the homogeneity of the study populations as they were both focused on the pregnant women. The finding of this study is at variance with that of Javali et al. (2022) among pregnant women in Deccan, South India which showed poor compliance with the recommended oral hygiene practices. The finding of this study is at variance with that of El-Mahdi et al. (2022) study among pregnant women attending Omdurman maternity hospital, Sudan which showed that majority of the women had poor oral health practices. The finding of the study is also at variance with that of Negi et al. (2022) study on oral hygiene practices among antenatal mothers showed poor oral hygiene practice among the women. The variation between the previous studies and the present one could be due to the difference in the study location as the present study was carried out in Rivers State Nigeria while the other were carried out in other locations that are heterogeneous to the present study area. Also, the sample sizes used in both studies were not the same.

The result showed that, all age category had high extent of practice but was more among those aged 44-49 years ( $\bar{X} = 2.76 \pm 0.85$ ). The finding of the study is in line with that of Wassihun et al. (2022) among pregnant mothers attending antenatal care at South Omo Zone public hospitals, Southern Ethiopia which showed practice towards oral hygiene was associated with the age of the women. The finding of this study is in consonance with that of Chinenye-Julius (2021) study on oral hygiene among pregnant women in Ogun State Nigeria which showed practice towards oral hygiene among the women was associated with age of the women. The result of this study is in consonance with that of Boggess et al. (2015) study on the oral hygiene practices and dental service utilization among pregnant women which showed good practice of oral hygiene was associated with the age of the women. The finding of the study is in line with that of Azodo and Omuemu (2017) study on oral health in pregnancy among Nigerian pregnant women which showed good practice towards oral hygiene was associated with the age of the women. The similarity between the previous studies and the present one could be explained by the homogeneity of the study populations as they were both focused on the pregnant women.

The result showed that, all category of educational status had high extent of practice but more among those with tertiary education ( $\bar{X} = 2.77 \pm 0.79$ ). The finding of the study is in line with that of Wassihun et al. (2022) among pregnant mothers attending antenatal care at South Omo Zone public hospitals, Southern Ethiopia which showed practice towards oral hygiene was associated with the educational status of the women. The finding of this study is in consonance with that of Chinenye-Julius (2021) study on oral hygiene among pregnant women in Ogun State Nigeria which showed practice towards oral hygiene among the women was associated with education of the women. The result of this study is in consonance with that of Boggess et al. (2015) study on the oral hygiene practices and dental service utilization among pregnant women which showed good practice of oral hygiene was associated with the educational status of the women. The finding of the study is in line with that of Azodo and Omuemu (2017) study on oral health in pregnancy among Nigerian pregnant women which showed good practice towards oral hygiene was associated with the education of the women. The similarity between the previous studies and the present one could be explained by the homogeneity of the study populations as they were both focused on the pregnant women.

The result showed that, all category of religious affiliation has but it was more among the Christians ( $\bar{X} = 2.74 \pm 0.85$ ). The finding of the study is in line with that of Wassihun et al. (2022) among pregnant mothers attending antenatal care at South Omo Zone public hospitals, Southern Ethiopia which showed practice towards oral hygiene was associated with the religious affiliation of the women. The finding of this study is in consonance with that of Chinenye-Julius (2021) study on oral hygiene

among pregnant women in Ogun State Nigeria which showed practice towards oral hygiene among the women was associated with religion of the women. The result of this study is in consonance with that of Boggess et al. (2015) study on the oral hygiene practices and dental service utilization among pregnant women which showed good practice of oral hygiene was associated with the religion of the women. The finding of the study is in line with that of Azodo and Omuemu (2017) study on oral health in pregnancy among Nigerian pregnant women which showed good practice towards oral hygiene was associated with the religious affiliation of the women. The similarity between the previous studies and the present one could be explained by the homogeneity of the study populations as they were both focused on the pregnant women.

The result showed that, all category of parity had high extent practice but it was more among those with 7-9 children ( $\bar{X} = 2.79 \pm 0.87$ ). The finding of the study is in line with that of Wassihun et al. (2022) among pregnant mothers attending antenatal care at South Omo Zone public hospitals, Southern Ethiopia which showed practice towards oral hygiene was associated with the parity of the women. The finding of this study is in consonance with that of Chinenye-Julius (2021) study on oral hygiene among pregnant women in Ogun State Nigeria which showed practice towards oral hygiene among the women was associated with parity of the women. The result of this study is in consonance with that of Boggess et al. (2015) study on the oral hygiene practices and dental service utilization among pregnant women which showed good practice of oral hygiene was associated with the parity of the women. The finding of the study is in line with that of Azodo and Omuemu (2017) study on oral health in pregnancy among Nigerian pregnant women which showed good practice towards oral hygiene was associated with the parity of the women. The similarity between the previous studies and the present one could be explained by the homogeneity of the study populations as they were both focused on the pregnant women.

## CONCLUSION

Based on the findings of the study, it is concluded that the determinants of oral hygiene practice among pregnant women in Rivers East Senatorial District were: age of women, educational status, religious affiliation and parity. Generally, the practice of oral hygiene was good. However, poor practice was found for use of floss after eating, visiting dentist when necessary to scale or clean the teeth and routine dental check-up.

## RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

1. Healthcare workers should as a matter of necessity, make oral health programmes as part of prenatal care for pregnant women.
2. Community stakeholder should be fully involved in the delivery of oral health information to women of all ages.
3. The Government through the ministry of health should re-evaluate the delivery of dental healthcare services in order to identify the gap in its among pregnant women of all ages, educational status and parity.
4. The primary healthcare board should collaborate with the LGA chairpersons to provide adequate oral care resources to give to pregnant women who visit the PHC facilities.
5. Community health workers should educate the women on their vulnerability to oral health conditions and encourage them to take oral hygiene seriously.

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