



## **Knowledge, Attitude and Practice in Treating Pregnant Women-A Questionnaire Survey**

*Dr. Gayathri. G<sup>1</sup>, Priyadharshini K<sup>2</sup>, Oviya.P<sup>3</sup>, Dr. Senthil kumar<sup>4</sup>, Dr. Mohamed Afradh<sup>5</sup>*

<sup>1</sup>Senior lecturer, Department of oral and maxillofacial surgery, Thai moogambigai dental college and hospital, Chennai, India

<sup>2 3</sup> Junior resident, Department of oral and maxillofacial surgery, Thai moogambigai dental college and hospital, Chennai, India

<sup>4</sup>Professor, Department of oral and maxillofacial surgery, Thai moogambigai dental college and hospital, Chennai, India

<sup>5</sup>Reader, Department of oral and maxillofacial surgery, Thai moogambigai dental college and hospital, Chennai, India

### **ABSTRACT**

#### **Background:**

Recent literature search shows there is an association between poor dental health in pregnant women and poor pregnancy outcomes. With this rationale, this study is determined to examine the expertise of dental students, the future practitioners in the care of pregnant patients' dental needs.

#### **METHODS:**

A cross-sectional survey of dentistry students from various colleges in Chennai was done. Participants are chosen through professional organisation. Along with demographics, the survey examined the domains of knowledge, attitude, barriers, and practises towards oral health care. Inferential and descriptive statistical analysis was done following the data collection of the study.

#### **CONCLUSION:**

Although only a few participants were correct in their responses, the majority lacked information about treating pregnant women, and the most surprising aspect was that the majority lacked understanding about treating basic dental needs. Preventive treatment begins with educating pregnant mothers on preventive oral health cases and basic dental needs.

### **INTRODCUTION**

Pregnancy is a common experience for most women, and it causes physiological and psychological changes. One of the most noticeable changes is the one in hormone levels such as estrogen and progesterone, which has a substantial impact on a variety of health conditions. These hormonal changes also influence the oral health of pregnant women. Higher levels of these hormones cause extensive sensitivity to irritation in the oral tissues especially gingiva causing gingivitis or periodontitis. In few extreme cases gingival swelling called epulis gravidarum or pregnancy tumor occurs.

Regardless of the risk and side effects associated with the oral and dental diseases during pregnancy, only few pregnant women take dental visits. Also the difference in knowledge and attitude among the dentist, most of them have difficulty in treating pregnant women.

During pregnancy professional dental care is important as much as personal oral hygiene. Almost most of the pregnant women still hesitate to obtain dental checkups during their pregnancy, though procedures such as scaling, root planning, extraction, local anesthesia were considered safe. (1)

Since pregnancy increases women's risk of oral infection, it is necessary to take proper preventive dental care. According to various studies, nearly 35-44% of women do not seek to obtain oral health care during their pregnancy due to lack of knowledge and fear about treatment (2)

### **MATERIALS AND METHODS**

An online questionnaire survey was conducted in a private dental college in Chennai. Dental clinical undergraduates and post graduates who were present in the college were included in the survey. Two hundred and eight students participated in the survey. A online questionnaire was prepared to collect the data. Demographic details were included in the questionnaire along with the questionnaire pertaining to knowledge, attitude and practice of dental students in treating pregnant women. Questionnaire was designed to contain 10 questions in 2 pages.

After obtaining the data descriptive analysis was done.

## RESULTS

Out of 208 clinical students 191 were UG students including interns, final year and third year of which 46 were male students and 145 were female students and only 17 students were postgraduate students of which 10 were male and 7 were female students. Only frequency of similar answers was considered and no comparisons were made.

Based on the question of which is the common oral disease during pregnancy most of them gave almost equal response to gingivitis 39% and all of the above 44% i.e., gingivitis, periodontitis and ulcer. Most of the students 41% responded that they will do only symptomatic treatment if an active dental infection like a dento alveolar abscess in pregnant women is present and few others said they will postpone the treatment until delivery. Majority of the participants 53% agreed that pregnancy causes gingivitis. There was bare minimum difference in answering the question that is taking Xray permitted during pregnancy during second trimester with lead apron, about 35% of them answered yes, 37% of them answered no and 28% of them answered don't know. Regarding the tooth extraction during the second trimester of pregnancy most of them around 40% students answered No. About the drug of choice for painkiller during pregnancy paracetamol got the highest preference with 52% . Regarding the use of local anesthesia containing lidocaine and epinephrine most of them answered that they were not sure and don't know. When the students were asked why the aspirin and other drugs containing salicylate is contraindicated in pregnancy the responses were almost equal for every option and there was bare minimum difference between prolonged pregnancy, severe bleeding and both. Left lateral position has been top voted for the most comfortable position for pregnant women to sit in the dental chair with 28% responses followed by Semi reclined position with a pillow under right hip with 26% responses. About 46% responses were recorded for all the above option that included extraction, scaling and root planning and root canal to be considered as safe during pregnancy.

### 1. Common oral disease during pregnancy

Common oral disease during pregnancy	PG		UG		Percent
	Male	Female	Male	Female	
Gingivitis	6	3	17	56	39.4
periodontitis	0	1	5	10	7.6
ulcers	0	0	2	16	8.7
all of the above	4	3	22	63	44.2

Table : 1

### 2. An active dental infection like a dento alveolar abscess in pregnant women requires?

An active dental infection like a dento alveolar abscess in pregnant women requires?	PG		UG		Percent
	Male	Female	Male	Female	
Postponed treatment till delivery	1	1	13	49	30.8
Only symptomatic treatment	4	3	22	57	41.3
Immediate treatment	5	3	11	39	27.9

Table : 2

### 3. Patient who is planning to get pregnant should be referred to dentist before pregnancy?

Patient who is planning to get pregnant should be referred to dentist before pregnancy?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	6	3	17	67	44.7
No	2	1	18	38	28.3
Don't know	2	3	11	40	26.9

Table : 3

4. Does scaling and plaque control before pregnancy reduces gingivitis during pregnancy?

Does scaling and plaque control before pregnancy reduces gingivitis during pregnancy?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	5	4	27	87	59.1
No	0	2	10	22	16.3
Don't know	5	1	9	36	24.5

Table : 4

5. At the beginning of pregnancy is there a need for dental and mouth examination by a dentist?

At the beginning of pregnancy is there a need for dental and mouth examination by a dentist?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	5	3	25	85	56.7
No	2	3	14	28	22.6
Don't know	3	1	7	32	20.7

Table : 5

6. Is good control of oral hygiene during pregnancy an essential for pregnant women?

Is good control of oral hygiene during pregnancy an essential for pregnant women?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	9	7	43	139	95.1
No	1	0	3	6	4.8
Don't know	0	0	0	0	0

Table : 6

7. Does health care practices like brushing or mouth washing are necessary after morning nausea and vomiting?

Does health care practices like brushing or mouth washing are necessary after morning nausea and vomiting?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	6	6	34	109	74.5
No	0	0	6	15	10.1
Don't know	4	1	6	21	15.3

Table : 7

8. Does pregnancy causes gingivitis?

Does pregnancy causes gingivitis?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	3	4	23	81	53.3
No	1	1	11	30	20.7
Don't know	6	2	12	34	26

Table : 8

9.Does pregnancy cause gingival bleeding?

Does pregnancy cause gingival bleeding?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	3	4	24	80	53.4
No	1	1	9	30	19.7
Don't know	6	2	12	35	26.4

Table :9

10.Does pregnancy can increase tooth decay?

Does pregnancy can increase tooth decay?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	2	2	11	46	29.3
No	3	4	21	56	40.4
Don't know	5	1	13	43	29.8

Table : 10

11.Is it permitted to take dental radiography in the second trimester with a lead apron?

Is it permitted to take dental radiography in the second trimester with a lead apron?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	5	4	17	46	34.6
No	2	1	19	55	37
Don't know	3	2	9	44	27.9

Table : 11

12.In second trimester of pregnancy, dental procedures such as scaling is not permitted?

In second trimester of pregnancy, dental procedures such as scaling is not permitted?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	4	2	9	44	28.3
No	3	3	23	51	38.4
Don't know	3	2	14	50	33.1

Table : 12

13.Whether tooth extraction is permitted during second trimester of pregnancy?

Whether tooth extraction is permitted during second trimester of pregnancy?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	3	3	15	44	31.2
No	4	4	17	58	39.9
Don't know	3	0	14	43	28.8

Table : 13

14. Which analgesic you prefer to use for pregnant women?

Which analgesic you prefer to use for pregnant women?	PG		UG		Percent
	Male	Female	Male	Female	
Ibuprofen	1	0	5	13	9.1
Paracetamol	3	5	21	79	51.9
Aceclofenac	0	1	5	11	8.2
All the above	6	1	15	42	30.8

Table : 14

15. Whether the use of dental anesthesia containing lidocaine and epinephrine is permitted during pregnancy?

Whether the use of dental anesthesia containing lidocaine and epinephrine is permitted during pregnancy?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	5	1	14	38	27.9
No	1	4	17	51	35.1
Don't know	4	2	15	56	37

Table: 15

16. Which drugs causes discoloration during pregnancy?

Which drugs causes discoloration during pregnancy?	PG		UG		Percent
	Male	Female	Male	Female	
Aminoglycosides	0	2	8	10	9.6
Corticosteroids	2	1	6	20	13.9
Tetracycline	4	2	19	56	38.9
Don't know	4	2	13	59	37.5

Table : 16

17. Choose the action of aspirin

Choose the action of aspirin	PG		UG		Percent
	Male	Female	Male	Female	
Anti inflammatory	1	4	9	30	21.1
Antipyretic	1	1	5	7	6.7
Analgesic	1	1	8	24	16.3
All of the above	7	1	24	84	56.7

Table : 17

18. Is it better to choose single prescriptions over polypharmacy when possible?

Is it better to choose single prescriptions over polypharmacy when possible?	PG		UG		Percent
	Male	Female	Male	Female	
Always	3	3	12	30	23.1
sometimes	4	4	20	77	50.5
Never	3	0	14	38	26.4

Table :18

19. Why aspirin and drugs containing salicylate are not recommended during third trimester?

Why aspirin and drugs containing salicylate are not recommended during third trimester?	PG		UG		Percent
	Male	Female	Male	Female	
Prolonged pregnancy	3	1	4	15	11.1
Severe bleeding	1	2	16	42	29.3
Both	2	3	15	46	31.7
None	4	1	11	42	27.9

Table : 19

20. What is the best comfortable position for pregnant women to sit in a dental chair for the treatment?

What is the best comfortable position for pregnant women to sit in a dental chair for the treatment?	PG		UG		Percent
	Male	Female	Male	Female	
Supine position	1	2	10	31	21.2
An upright position and turning to the right side	4	2	11	34	24.5
Semi reclined position with a pillow under right hip	0	2	12	39	25.5
Left lateral tilt position	5	1	13	40	28.4

Table : 20

21. What is the position of the patient in the dental chair during extraction?

What is the position of the patient in the dental chair during extraction?	PG		UG		percent
	Male	Female	Male	Female	
supine position	1	2	15	51	33.1
upright position and turning to the right side	3	4	19	49	36.1
Semi supine	6	1	12	45	30.8

Table : 21

22. If pregnant women in third trimester develop supine hypotension in the dental chair, what should be done?

If pregnant women in third trimester develop supine hypotension in the dental chair, what should be done?	PG		UG		percent
	Male	Female	Male	Female	
Make the patient sit upright	1	2	16	30	23.6
Move the patient to left lateral position	3	3	6	47	28.4
Raise the legs up	1	1	4	10	7.7
All the above	5	1	20	58	40.4

Table : 22

23. Which is your prime source of knowledge about dental management of pregnant women?

Which is your prime source of knowledge about dental management of pregnant women?	PG		UG		Percent
	Male	Female	Male	Female	
Text book	5	2	14	47	32.7
Internet	3	1	10	26	19.2
Doctor consultation	2	4	22	72	48.1

Table : 23

24. Have you ever neglected treating gravid women due to lack of knowledge?

Have you ever neglected treating gravid women due to lack of knowledge?	PG		UG		Percent
	Male	Female	Male	Female	
Yes	6	2	15	36	28.4
No	4	5	31	109	71.6

Table : 24

25. How often do you educate the pregnant patients regarding the oral health and its influence on the fetus?

How often do you educate the pregnant patients regarding the oral health and its influence on the fetus?	PG		UG		Percent
	Male	Female	Male	Female	
Always	4	5	18	66	44.7
Sometimes	4	1	17	55	37
Rarely	2	1	11	24	18.3

Table : 25

26. Calcium will be drawn out of mother's teeth by developing baby

Calcium will be drawn out of mother's teeth by developing baby	PG		UG		Percent
	Male	Female	Male	Female	
TRUE	5	3	20	55	39.9
FALSE	5	4	26	90	60.1

Table : 26

27. Poor maternal oral health can contribute to early childhood decay

Poor maternal oral health can contribute to early childhood decay	PG		UG		Percent
	Male	Female	Male	Female	
Yes	6	5	32	86	62
No	4	2	14	59	38

Table: 27

28. Which of the dental procedures are safe during pregnancy?

Which of the dental procedures are safe during pregnancy?	PG		UG		Percent
	Male	Female	Male	Female	
Extraction	2	2	3	11	8.7
Root canal	2	0	5	7	6.7
Scaling and root planing	3	5	11	61	38.5
All of the above	3	0	27	66	46.1

Table : 28

## DISCUSSION

The present study was conducted to access the knowledge, attitude and practice of treating pregnant women and awareness among dental undergraduate and postgraduate students. When asked about the common oral diseases during pregnancy all the three gingivitis, periodontitis and ulcer options were chosen by most of the respondents which is in relevance with the previous study in which the participants readily agreed the pregnancy increases the chances of gingival inflammation (3)

Most of the students stated that they will do only symptomatic treatment if there is presence of active infection in them and in other questionnaire most of the students stated that treatments such as extraction, root canal, scaling and root planning is safe during pregnancy which is similar to the findings in previous study (4). But if dental caries causes pain due to acute infection in an otherwise healthy pregnant woman, it is the dentist's job to give immediate care regardless of the patient's pregnancy stage (5). Regarding taking Xray during the second trimester with lead apron only less than half of the students agreed safe. It was similar to finding of the study in which most of them said and its contraindicated and doesn't have proper knowledge about it (6). Only 31% participants agreed that tooth extraction can be done during second trimester of pregnancy and others said no and some of them don't have proper knowledge about it.

About the drug of choice more than half of participants recommended paracetamol as painkiller which also correlates with the findings of the previous study (7). In contrary to the previous studies where local anesthesia was considered safe during pregnancy (8) (9), participants of our study hesitated and most of them answered no and few has no knowledge about it. Participants also concluded that aspirin and salicylate containing other drugs can cause prolonged pregnancy, severe bleeding, etc. but according to the opinion released by the American college of Obstetricians and gynecologists daily use of low dose aspirin is completely safe during pregnancy.

In contrary to the previous study findings (10) only 26% respondents of our study identified that semi reclined position with a pillow under right hip is the best position to advocate dental treatments. And most of them said left lateral position, but this position is employed only in the case of maternal hypotension developed from supine position.

In summary, we discovered that a large number of participants lacked the necessary knowledge to manage pregnant patients. Students' confidence levels can be increased by implementing curriculum to strengthen their experience dealing with pregnant patients in dental clinics during their training period, as well as having an in-depth foundation on the knowledge of oral health needs and treatment options for pregnant females, as well as encouraging them to update their knowledge by attending CDE programmes on a frequent basis.

## CONCLUSION

Although few participants were right about the responses most of them lacked knowledge about treating a pregnant woman. And the surprising element was most of them have no or minimal knowledge about treating basic dental needs. Improving the attitude and knowledge of dental students by facing more gestational mothers in their training period will do the favor. The basic starts from the preventive care by educating the pregnant mothers about preventive oral health care and basic dental needs too.

## REFERENCES:

- George A, Dahlen HG, Reath J, Ajwani S, Bhole S, Korda A, et al. What do antenatal care providers understand and do about oral health care during pregnancy: a cross-sectional survey in New South Wales, Australia. *BMC Pregnancy Childbirth*. 2016;16:382.
- May, Linda. (2014). Pregnant Patient Knowledge of and Obstetric Provider Advice on Oral Health. *Journal of Dentistry, Oral Disorders & Therapy*. 2. 01-06. 10.15226/jdodt.2014.00107.
- Onigbinde O, Sorunke M, Braimoh M, Adeniyi A. Periodontal status and some variables among pregnant women in a Nigeria tertiary institution. *Ann Med Health Sci Res*. 2014;4(6):852–57. <https://doi.org/10.4103/2141-9248.144876> PMID:25506475 PMCID:PMC4250980.
- Tantradi P, Madanshetty P. Knowledge of dental interns about management of dental needs of pregnant patients. *J Educ Ethics Dent*. 2013;3:76–80. <https://doi.org/10.4103/0974-7761.136050>.
- Achtari MD, Georgakopoulou EA, Afentoulide N. Dental care throughout pregnancy: what a dentist must know. *Oral Health Dent Manag*. 2012;11:169–176.
- Swapna LA, Alanazi EZM, Aldoji AAA, Koppolu P, Alqerban A. Awareness of Dental Interns to Treat Pregnant Patients. *Open Access Maced J Med Sci*. 2019 Aug 29;7(19):3265-3269. Doi: 10.3889/oamjms.2019.678. PMID: 31949528; PMCID: PMC6953919.
- Al Khamis S, Asimakopoulou KA, Newton T, Daly B. The effect of dental health education on pregnant women's adherence with toothbrushing and flossing – A randomized control trial. *Community Dent Oral*. 2017;45(5):469–477. <https://doi.org/10.1111/cdoe.12311> PMID:284363.
- Kurien S, Kattimani V S, Sriram R, Sriram S K, Prabhakar Rao VK, Bhupathi A, Bodduru R, Patil N N. Management of Pregnant Patient in Dentistry. *J Int Oral Health*. 2013;5(1):88–97.



- 
9. Hemalatha VT, Manigandan T, Sarumathi T, Aarthi Nisha V, Amudhan A. Dental considerations in pregnancy-a critical review on the oral care. *J Clin Diagn Res.* 2013;7(5):948–53.
10. Tantradi P, Madanshetty P. Knowledge of dental interns about management of dental needs of pregnant patients. *J Educ Ethics Dent.* 2013;3:76–80. <https://doi.org/10.4103/0974-7761.136050>.