

## SELF-REPORTED ORAL HEALTH ATTITUDE AND BEHAVIOR AMONG PREGNANT WOMEN

Zahra Al Omran\*, Zahraa Al-Shakhori, Nora Al-Qhtani, Dr. Mohammad Abdul  
Baseer and Dr. Bader Bamousa

Saudi Arabia.

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\*Corresponding Author

Zahra Al Omran

Saudi Arabia.

### ABSTRACT

Pregnancy has no direct causation on tooth loss. Number of factors that influence the rapidity and progression of incipient or already well-established oral disease. Hormonal changes during pregnancy likely to predispose women to gingivitis, affecting 35-100% of pregnant women. This is mainly because of estrogen. Gum become inflamed, edematous and sensitive, with a tendency to bleed easily and existing gingivitis may worsen considerably during pregnancy if plaque is not removed. A cross-sectional study was designed to collect data from

pregnant women attending at gynecology department. All the responses were collected, entered into the excel sheet and subjected to statistical analysis by SPSS software program. In general pregnant women from Al-Sharaqia city showed poor oral health attitude and behaviors. Non-Saudi Pregnant women (5.89) showed significantly higher mean HU-DBI score compared to non-pregnant women (4.76),  $t=-2.907$ ,  $p=0.004$ . Other socio-demographic variables (working status, education, income and trimesters of pregnancy) did not show any significant difference with respect to the HU-DBI score  $p>0.005$ .

**KEYWORDS:** Pregnancy, Oral Health, Gingivitis, Plaque.

### INTRODUCTION

Pregnancy is a unique time in women's life and is characterized by complex physiological changes. These changes can adversely affect oral health. Therefore, the pregnant women requires special care in terms of oral health care and nutrition. Pregnancy has no direct causation on tooth loss. Number of factors that influence the rapidity and progression of incipient or already well-established oral disease. Hormonal changes during pregnancy likely to predispose women to gingivitis, affecting 35-100% of pregnant women. This is mainly

because of estrogen. Gum become inflamed, edematous and sensitive, with a tendency to bleed easily and existing gingivitis may worsen considerably during pregnancy if plaque is not removed. Equipped with Proper oral health knowledge, attitude and practices and timely dental care pregnant women are able to prevent and control dental problems and their complications during pregnancy. Study from Dammam reported no association between oral health knowledge and oral hygiene practices pregnant women from government hospital. However, none of the studies have measured oral health attitudes and behavior by using standardized questionnaire like HU-DBI (Hiroshima University Dental Behavioral Inventory), in Saudi Arabia.

### **Aim of the Study**

To assess oral health attitude and behavior among pregnant women by using HU-DBI in AlSharqiya city, Saudi Arabia.

### **Study Subjects and Methods**

#### **Ethical Approval**

Study proposal was submitted to the research center of the RCsDP, and formal approval obtained. Study registration number FUGRP/2016/136.

#### **Study Design and Setting**

A cross-sectional study was designed to collect data from pregnant women attending at gynecology department of (Al Jafr Hospital, maternity and children's hospital, Qatif Central Hospital, Al Arabia Primary Healthcare Center) Al-Sharaqia from September to December 2016.

#### **Informed Consent**

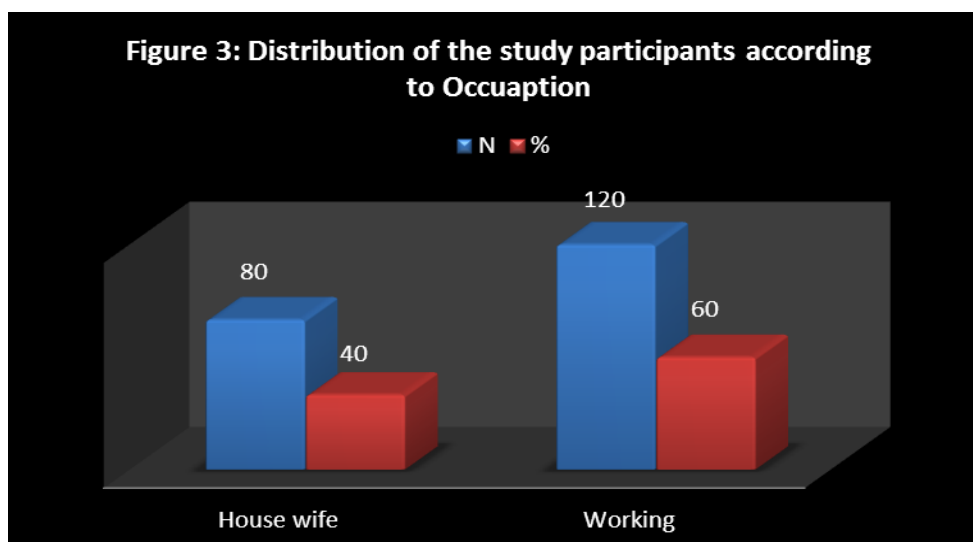
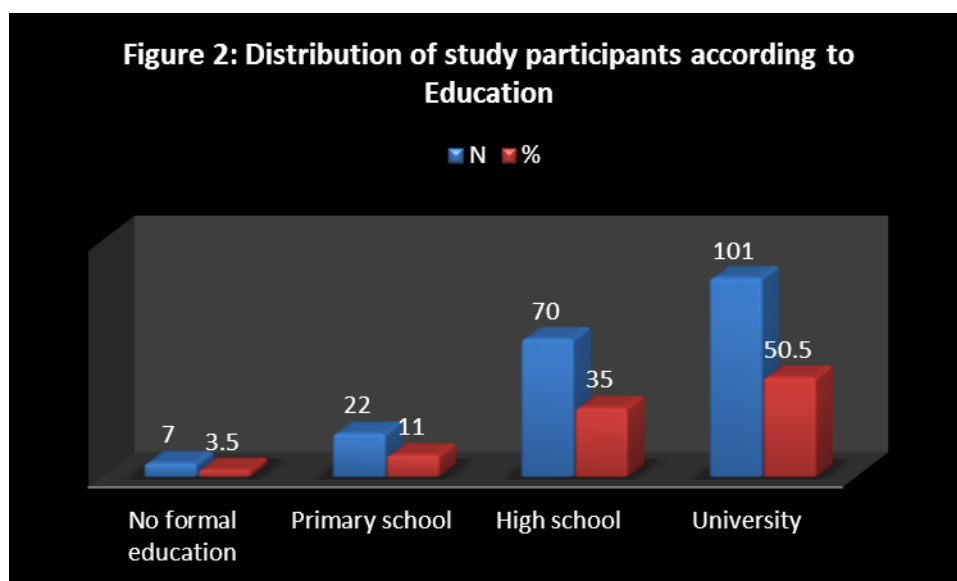
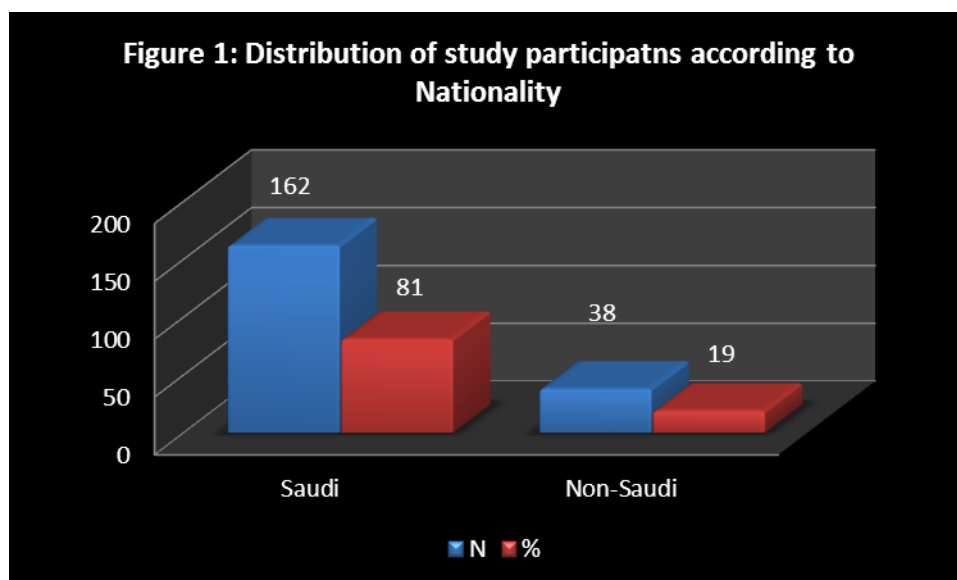
Obtained from pregnant women.

All the responses were collected, entered into the excel sheet and subjected to statistical analysis by SPSS software program.

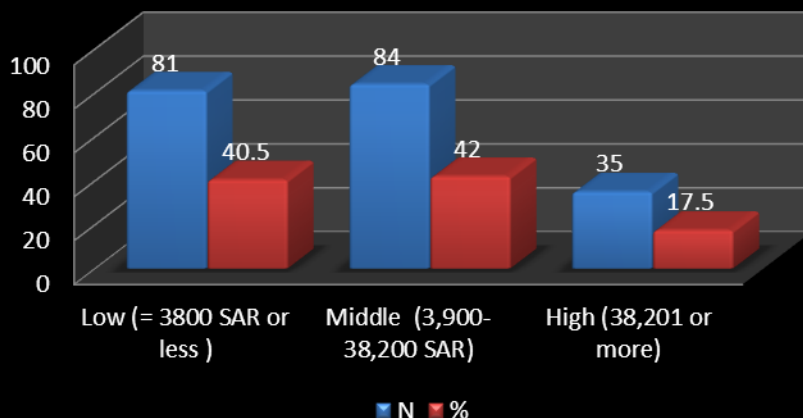
#### **Statistical Analysis**

Frequency distribution tables, mean and standard deviations scores of HU-DBI scores calculated. Inferential statistics of independent t test and ANOVA were performed to compare differences between the means for categorical variables. A p value of less than 0.05 was considered statistically significant.

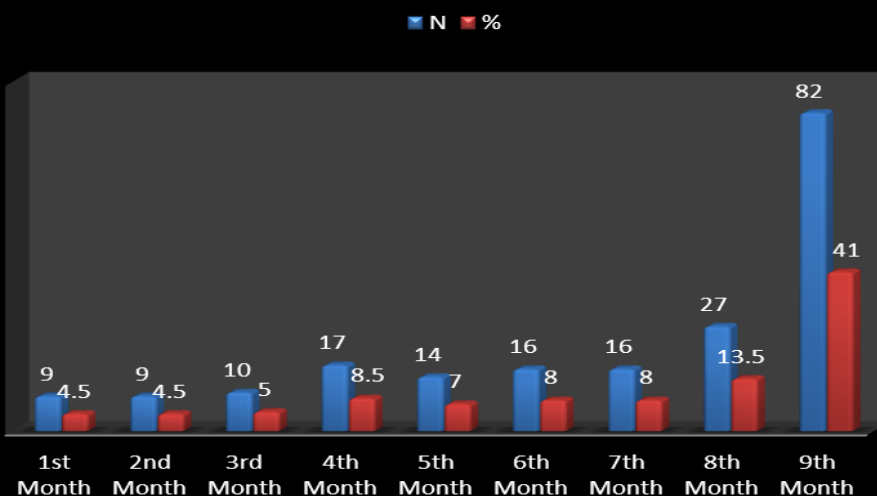
## RESULT



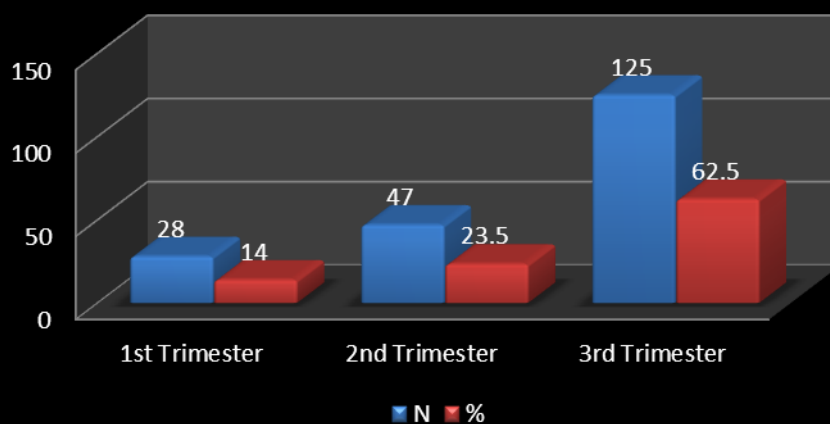
**Figure 4: Distribution of the study participants according to family income**



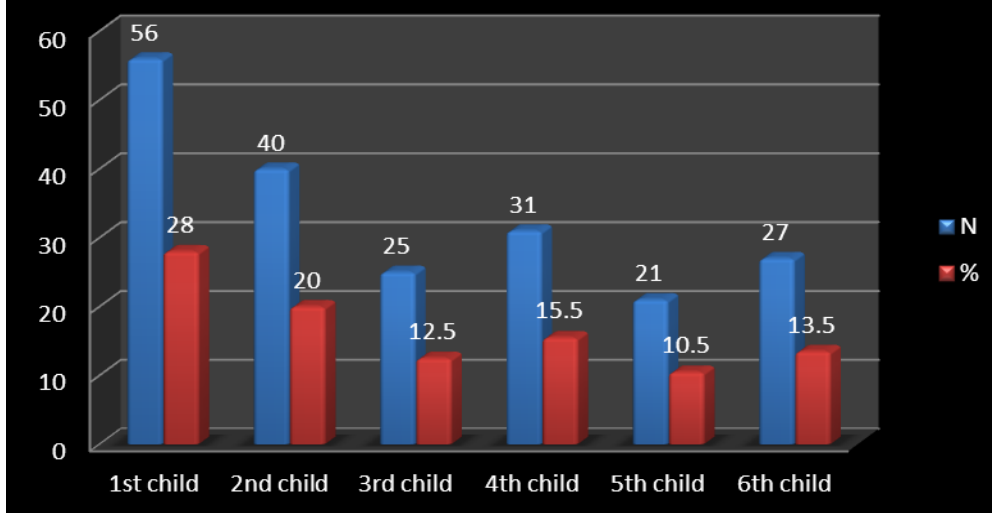
**Figure 5: Months of pregnancy**



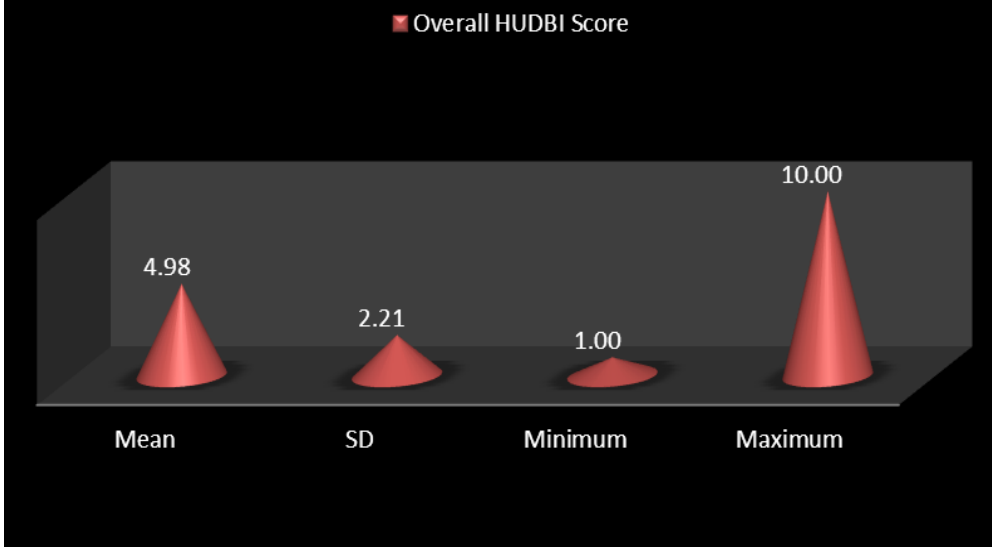
**Figure 6: Distribution of study participants according to pregnancy trimesters**



**Figure 6: Distribution of study participants according to the delivering Birth order of child**



**Figure 7: Overall HUDBI Score (Maximum score =12)**



**Table 1: Agree and Disagree responses of the study subjects.**

Items of HU-DBI		Agree	Disagree
I don't worry much about visiting the dentist	n	121	79
	%	60.5	39.5
My gums tend to bleed when I brush my teeth	n	137	63
	%	68.5	31.5
I worry about the color of my teeth	n	168	32
	%	84	16
I have noticed some white sticky deposit on my teeth	n	124	76
	%	62	38
I use a child sized toothbrush	n	52	148
	%	26	74
I think that I cannot help having false teeth when I am old	n	107	93
	%	53.5	46.5
I am bothered by the color of my gums	n	163	37
	%	81.5	18.5
I think my teeth are getting worse despite my daily brushing	n	133	67
	%	66.5	33.5
I brush each of my teeth carefully	n	166	34
	%	83	17
I have never been taught professionally how to brush	n	144	56
	%	72	28
I think I can clean my teeth well without using toothpaste	n	71	129
	%	35.5	64.5
I often check my teeth in a mirror after brushing	n	113	87
	%	56.5	43.5
I worry about having bad breath	n	152	48
	%	76	24
It is impossible to prevent gum disease with toothbrushing alone	n	156	44
	%	78	22
I put off going to the dentist until I have tooth ache	n	132	68
	%	66	34
I have used a dye to see how clean my teeth are	n	54	146
	%	27	73
I use a toothbrush with hard bristles	n	103	97
	%	51.5	48.5
I don't feel I have brushed well unless I brush with strong strokes	n	114	86
	%	57	43
I feel I sometimes take too much time to brush my teeth	n	76	124
	%	38	62
I have had my dentist tell me that I brush very well	n	86	114
	%	43	57

**Table 2: Comparison of mean HU-DBI scores between Saudi and non-Saudi study participants.**

	N	Mean	SD	t	p*
Saudi	162	4.76	2.201	-2.907	<b>0.004</b>
Non-Saudi	38	5.89	2.011		

\* independent t test

**Table 3: Comparison of mean HU-DBI scores between home makers and working women.**

	N	Mean	SD	t	p*
Non-working woman	80	5.000	2.075	0.131	0.896
Working woman	120	4.958	2.299		

\* independent t test

**Table 4: Comparison of mean HU-DBI scores among different educational categories.**

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		F	p <sup>§</sup>
					LB	UB		
No formal education	7	<b>6.29</b>	1.60	0.61	4.80	7.77	1.308	<b>0.273</b>
Primary school	22	<b>4.82</b>	2.20	0.47	3.84	5.79		
High school	70	<b>5.17</b>	2.30	0.28	4.62	5.72		
University	101	<b>4.78</b>	2.16	0.22	4.36	5.21		
Total	200	<b>4.98</b>	2.21	0.16	4.67	5.28		

§ ANOVA (Analysis of Variance)

**Table 5: Comparison of mean HU-DBI scores among different income categories.**

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		F	p
					LB	UB		
Low (= 3800 SAR or less)	81	4.728	2.242	0.249	4.233	5.224	1.561	0.212
Middle (3,900-38,200 SAR)	84	4.988	1.979	0.216	4.559	5.418		
High (38,201 or more)	35	5.514	2.582	0.437	4.627	6.401		
Total	200	4.975	2.207	0.156	4.667	5.283		

§ ANOVA (Analysis of Variance)

**Table 6: Comparison of mean HU-DBI scores among different trimesters of pregnancy.**

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		F	p <sup>§</sup>
					Lower Bound	Upper Bound		
1st trimester	28	5.286	2.339	0.442	4.379	6.193	0.340	0.712
2 <sup>nd</sup> trimester	47	4.979	2.182	0.318	4.338	5.619		
3 <sup>rd</sup> trimester	125	4.904	2.198	0.197	4.515	5.293		
Total	200	4.975	2.207	0.156	4.667	5.283		

§ ANOVA (Analysis of Variance)

In general pregnant women from Al-Sharaqia city showed poor oral health attitude and behaviors. Non-Saudi Pregnant women (5.89) showed significantly higher mean HU-DBI score compared to non-pregnant women (4.76),  $t=-2.907$ ,  $p=0.004$ . Other socio-demographic

variables (working status, education, income and trimesters of pregnancy) did not show any significant difference with respect to the HU-DBI score  $p > 0.005$ .

## DISCUSSION

Recent studies have provided link between oral diseases and poor pregnancy outcomes. Hence every women planning for the pregnancy and child birth should be made aware of the importance of oral health, thus preventing the adverse pregnancy outcomes. Present study showed a mean HU-DBI score of  $4.98 \pm 2.21$ , among pregnant women in Sharaqia. This suggested inadequate attitude and behaviors toward oral health by pregnant women. This study results are in line with other studies reported from UAE, and Kuwait in which pregnant women have shown inadequate oral health knowledge, poor utilization of dental services.

## Limitation

Study did not attempt to measure the existing oral health knowledge of the pregnant women. There may be over or under reporting of the oral health information from the students due to the social desirability. Cross sectional design and convenience sampling methodology may be limitation of this study because of its inability to attribute causality. Generalization of study results showed be done cautiously.

## CONCLUSION

Within the limitations of the study it can be concluded that pregnant women considered in the study showed inadequate oral health attitude and behaviors. There is a need to improve the attitude and behaviors of pregnant women towards oral health. Dental and medical professionals should take a proactive approach to improve oral health attitudes and behaviors of pregnant women in Al-Sharaqia city. There is a need for further study to with larger sample size to draw valid conclusion and generalize results.

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