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Navigating Maternal Health in Dentistry: Perceptions of Students and Interns on Treating Pregnant Patients

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Research Article

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ABSTRACT

This study investigates the perceptions of dental students and intern regarding the treatment of pregnant patients, focusing on their knowledge, confidence levels, and perceived barriers. A survey was conducted to collect data from dental students and intern to assess their awareness of maternal health issues related to dental care. The results indicate significant gaps in knowledge and confidence, highlighting the need for improved education in maternal health within dental curricula. The findings suggest that addressing these gaps can enhance the quality of care provided to pregnant patients and ensure safer dental practices.

Method: A cross-sectional survey was conducted among 200 dental students, comprising 44 males (22.0%) and 156 females (78.0%), including 80 third-year BDS students, 60 fourth-year BDS students, and 60 intern. The survey included 14 questions exploring awareness, and perceptions, On digital dentistry for pre-clinical Curriculum. Responses were analyzed based on gender and year of study using chi-square tests to identify statistically significant differences.

Aim: To evaluate the perceptions, knowledge, and attitudes of dental students and intern concerning the treatment of pregnant patients in a clinical setting.

Keywords: Attitudes, Dentistry, Dental Education, Dental Students, Interns, Knowledge, Maternal Health, Oral Health, Pregnancy.

Introduction

Maternal health is a vital component of healthcare that significantly influences both maternal and fetal outcomes. In dentistry, treating pregnant patients requires special considerations due to the physiological changes that occur during pregnancy and the potential risks associated with dental procedures. This study aims to explore the perceptions of dental students and intern regarding their preparedness and attitudes toward

treating pregnant patients. Understanding these perceptions is crucial for enhancing educational programs and improving the quality of care provided to pregnant patients in dental settings.

Methodology

a) **Study design and area:** A cross-sectional study was carried out at the tertiary care teaching hospital Khammam.
b) **Study population:** The health care students including those of IV year and Intern who responded to the offline paper print questionnaire survey.
c) **Study Instrument:** A self-administered questionnaire was designed based on knowledge attitude and awareness of the advanced technology and had a total of 14 questions. Each participant has to fill in their demographic data like name, age, and year of study. Participants had to select one option from the answers provided against questions the questions were based on knowledge attitude and awareness among dental students.
d) **Pilot Study:** A pilot study was conducted on a group of students to assess the validity and reliability of the study.
e) **Sampling Method:** The sampling method used is a convenience method.
f) **Inclusion Criteria:** The students who were interested in the study and who are willing to participate.
g) **Exclusion Criteria:** students who are not willing to participate are excluded.
h) **Organizing the study:** The study was designed in a paper-based version of the self-administered questionnaire of 14 questions focusing on knowledge, and awareness.

Includes the sections of demographic data: Name, Age, Sex, and Year of study demographic information and asked to answer all questions by selecting one option from the provided answers. I) **Statistical Analysis:** Data from the filled questionnaire was collected in a tabular form in an Excel worksheet and evaluated for analysis. The analysis was performed by SSPS version 29.

Result

A total of 200 students took part in this with females (78.0%) and males of (22.0%). Age of the participants ranged from 18-27 years. In this study, females were more likely to demonstrate awareness of Digital dentistry than males. Significantly Intern showed greater familiarity with advanced applications than fourth-year students.

Age					
	N	Minimum	Maximum	Mean	Std. Dev
Age	200	19	26	23.46	1.893

Gender		Frequency	Percent
Valid	Male	44	22.0
	Female	156	78.0
	Total	200	100.0

Year of the study		Frequency	Percent
Valid	III BD	80	40.0
	IV BD	60	30.0
	INTERN	60	30.0
	Total	200	100.0

Distribution and comparison of responses based on gender

Item	Response	Males		Females		Chi-Square value	P value
		n	%	n	%		
Q1	1	18	40.9	48	30.7	5.464	0.05*
	2	14	31.8	52	33.3		
	3	12	27.2	56	35.8		
Q2	1	9	20.4	25	16.0	7.577	0.016*
	2	19	43.1	41	26.2		
	3	11	25.0	54	34.6		
	4	5	11.3	36	33.0		
Q3	1	4	6.7	15	/10.4	6.481	0.090
	2	5	15.4	20	12.1		
	3	3	4.1	15	22.6		
	4	32	75.1	96	56.8		
Q4	1	16	42.1	22	17.9	19.818	0.0001*
	2	15	40.5	25	19.5		
	3	9	15.4	70	51.3		
	4	4	4.2	34	25.1		
Q5	1	16	35.7	90	64.3	8.765	0.06
	2	24	54.3	54	25.7		
	3	4	12.1	22	11.6		
Q6	1	15	63.7	25	46.3	5.057	0.158
	2	7	47.6	33	52.4		

	3	10	62.5	85	67.5		
	4	12	67.7	10	32.3		
Q7	1	18	57.1	21	42.9	6.578	0.07
	2	15	54.9	37	45.1		
	3	10	22.5	87	54.1		
	4	1	20.4	1	32.5		
Q8	1	5	10.4	95	56.6	7.167	0.09
	2	19	39.6	23	14.5		
	3	15	35.7	12	11.7		
	4	5	10.4	26	17.5		
Q9	1	19	29.1	30	46.9	1.211	0.750
	2	15	30.6	26	39.4		
	3	10	25.4	73	54.6		
Q10	1	24	52.2	22	15.8	8.275	0.041*
	2	9	30.4	19	19.6		
	3	7	20	20	23		
	4	4	10.4	94	43.5		
Q11	1	26	59.0	41	26.2	6.474	0.04*
	2	8	18.1	80	51.2		
	3	10	22.7	35	22.4		
Q12	1	20	13.5	26	16.5	6.303	0.98
	2	32	19.3	22	20.7		
	3	61	64.9	33	25.1		
	4	35	16.6	90	47.5		
Q13	1	10	29.2	54	36.8	2.483	0.478
	2	14	32.1	18	17.5		
	3	14	32.1	63	43.5		
	4	6	5.6	16	21.6		

Q14	1	21	47.7	24	15.3	6.575	0.04*
	2	6	13.6	24	15.3		
	3	10	22.7	52	33.1		
	4	7	15.9	56	35.8		

P≤0.05 is statistically significant

Distribution and comparison of responses based on the year of the study

Item	Response	III BDS		IV BDS		INTERN		Chi- Value	P-Value
		n	%	n	%	n	%		
Q1	1	80	100	60	0	0	0	6.375	0.001*
	2	0	0	0	100	0	0		
	3	0	0	0	0	80	100		
Q2	1	7	8.7	10	16.6	14	23.3	7.842	0.05”
	2	36	45.0	36	60	24	40.0		
	3	20	25.0	12	20	14	23.3		
	4	17	21.2	2	3.3	8	13.3		
Q3	1	46	53.3	6	15	6	15	11.192	0.513
	2	14	20.6	16	23.5	3	4.4		
	3	18	21.7	14	16.9	9	10.8		
	4	10	15.9	11	25	7	15.9		
Q4	1	6	15.8	6	15.8	4	10.5	17.051	149
	2	6	16.2	11	29.7	1	2.7		
	3	26	23.4	33	34.5	34	43.5		
	4	42	36.5	8	12.6	25	34.6		
Q5	1	5	14.3	5	14.3	25	44.3	18.317	0.106

	2	15	23.8	17	27.6	23	42.8		
	3	60	61.6	38	58.5	12	13.6		
Q6	1	9	16.7	8	14.8	8	14.8	42.592	0.07
	2	15	23.8	16	25.4	1	1.6		
	3	42	8	20	22.7	9	10.2		
	4	14	45.2	4	12.9	7	22.6		
Q7	1	3	6.1	9	18.4	11	22.4	19.802	0.071
	2	16	19.5	18	22.5	7	8.5		
	3	46	54.7	25	32.6	20	21.5		
	4	15	32.2	17	23.6	30	51.9		
Q8	1	40	59.4	21	41.6	13	23.3	15.579	0.06
	2	22	30.6	19	39.4	25	36.9		
	3	11	6.8	11	12.6	12	18.6		
	4	7	5.7	9	11.5	10	16.6		
Q9	1	48	12.5	6	9.4	13	20.3	22.714	0.07
	2	11	16.7	15	22.7	6	9.1		
	3	21	20.3	20	27	4	5.4		
Q10	1	5	10.9	5	10.9	10	21.7	19.322	0.081
	2	10	20.8	12	25.5	3	6.2		
	3	30	50.6	13	26.7	17	54.6		
	4	27	19.1	30	39.5	38	18.5		
Q11	1	61	76.2	15	25.0	20	33.3	5.536	0.04*

	2	11	13.7	25	41.6	28	46.6		
	3	8	10.0	20	33.3	12	20.0		
Q12	1	6	13	5	10.9	10	21.7	29.118	0.04*
	2	10	8.5	7	13.6	4	17.4		
	3	17	18.1	31	53.5	5	15.3		
	4	47	73.8	22	24.5	59	67.6		
Q13	1	36	29.5	13	20.6	11	17.5	4.246	0.284
	2	10	20.8	8	16.7	4	8.3		
	3	22	22.6	30	50.0	25	44.6		
	4	12	21.4	9	17.5	20	31.5		
Q14	1	20	25.0	4	6.6	6	10.0	4.246	0.03*
	2	7	8.7	21	35.0	9	15.0		
	3	25	31.2	25	41.6	24	40.0		
	4	26	32.5	10	16.6	21	35.0		

P≤0.05 is statistically significant

Discussion

The findings of this study highlight the importance of maternal health education in dental training. Many students and intern expressed uncertainty regarding the safety of various dental procedures during pregnancy, which could lead to hesitancy in providing necessary care. Additionally, the study identified several barriers, including a lack of comprehensive training and resources on maternal health topics. To address these issues, dental schools should consider integrating more maternal health content into their curricula, providing workshops, and facilitating discussions on managing pregnant patients. Future research should focus on longitudinal studies to track the impact of enhanced education on the confidence and practices of dental professionals when treating pregnant patients.

The results of this study reveal several key issues regarding the treatment of pregnant patients in dental practice. First, the lack of confidence reported by many students and intern indicates a significant educational gap that must be addressed. This lack of confidence can lead to delays in treatment or avoidance of necessary dental care

for pregnant patients, which could have adverse effects on both maternal and fetal health.

Moreover, the study identified specific barriers that students face, such as limited exposure to maternal health topics during their training and a lack of resources to guide them in treating pregnant patients. These barriers highlight the need for dental schools to not only include maternal health in their curricula but also to provide practical training opportunities that allow students to engage with pregnant patients in a clinical setting.

Furthermore, fostering an environment where students can discuss and share their concerns about treating pregnant patients is essential. This can be achieved through workshops, seminars, and interprofessional collaborations with obstetricians and midwives. Such initiatives can enhance students' understanding of the interdisciplinary nature of maternal care and encourage a more integrated approach to patient management.

In conclusion, improving the education and training of dental students and intern regarding maternal health is crucial for ensuring that pregnant patients receive the best possible care. By addressing the identified gaps and barriers, dental education can evolve to meet the needs of both future dental professionals and the populations they serve. Future research should focus on evaluating the effectiveness of these educational interventions and their impact on the confidence and practices of dental professionals in treating pregnant patients.

Conclusion

The study reveals that dental students and intern have varying levels of knowledge and confidence in treating pregnant patients. There is a clear need for enhanced training and education in maternal health within dental programs. By improving awareness and addressing perceived barriers, dental professionals can provide better care for pregnant patients, ultimately contributing to improved maternal and fetal health outcomes.

The findings of this study underscore the critical gaps in knowledge and confidence among dental students and intern when it comes to treating pregnant patients. Despite the growing recognition of the importance of maternal health, the current educational framework in dental schools appears insufficient to equip future dental professionals with the necessary skills and understanding. Many participants reported feeling unprepared to manage the unique challenges posed by pregnant patients, indicating an urgent need for curriculum enhancements. By integrating comprehensive maternal health education into dental training programs, we can foster a generation of dental professionals who are not only knowledgeable but also confident in their ability to provide safe and effective care for pregnant patients. Ultimately, addressing these educational gaps can lead to improved clinical practices, better patient outcomes, and a more holistic approach to maternal healthcare in dentistry.

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