



Assessment and Evaluation of Knowledge, Attitude and Practices of Dental Practitioners about Hypnosis and its Applications in Dentistry – A Cross Sectional Survey

1Umadevi Erappa, 2Ganesh Jeevanandan, 3Jaya Naidu

1MDS In Pediatric & Preventive Dentistry, Reader, Department of Pediatric & Preventive dentistry, Vydehi Institute of Dental Sciences & Research Centre, Bengaluru, Karnataka, India. PhD Scholar in Department Pediatric & preventive Dentistry, Saveetha Dental College. ORCID: 0000-0003-4314-9940

2PhD, MDS In Pediatric & Preventive Dentistry, Clinical Head, Department of Pediatric & Preventive dentistry, Saveetha Dental College, Chennai, Tamil Nadu, India

3Professor & HOD, Department of Pediatric & Preventive dentistry, Vydehi Institute of Dental Sciences & Research Centre, Bengaluru, Karnataka, India.

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KEYWORDS

Dental practitioners, dentists, Hypnosis, KAP survey

ABSTRACT:

Introduction: Hypnosis is being recognized as a useful tool in medical and dental field by various organizations like, the British Medical Association. Even though hypnosis is gaining popularity, it is seldom used, due to the lack of awareness and requirement of additional training for practicing. Hence, assessment of knowledge and level of acceptance of hypnosis among dental practitioners to increase its applicability becomes a priority to bridge the gap. But the literature shows scarcity of studies to assess the knowledge and attitude of dentists regarding hypnosis, especially in India, hence the present study was aimed at evaluating the same.

Objectives: To assess and evaluate the knowledge, attitude, and practices of general practitioners in South Indian States about hypnosis and its applications in Dentistry through a questionnaire

Methods: A self – administered pre-validated questionnaire was sent to the dentist in South Indian states through mails to 192 randomly selected dentists who are academicians, general practitioners and post graduate students in various colleges situated in South Indian states. The responses were tabulated and subjected to statistical analysis.

Results: The results showed that the knowledge increased with increased experienced and degree. Though the knowledge of the participants were found to be average, they showed a positive attitude towards learning hypnosis.

Conclusions: There is requirement of additional effort by the institutions and university to improve the knowledge so that it becomes better accepted and incorporated in the clinical practice.

1. Introduction

The dental world has seen a tremendous growth in the field of dentistry concerning various treatment modalities. There has been a wide range of newer concepts which are explored during the current decades and are yet to be accepted on a larger scale by the dental fraternity. Clinical hypnosis is one such option for the management of patients in dental scenario [1]. Clinical hypnosis is routinely used as an accessory to modern medicine. Whereas in dentistry it is mainly used as an adjunct for safer

deliver of local anesthesia or conscious sedation and to minimize anxiety and stress[2].

An American psychiatrist Milton Erickson proposed a definition for hypnosis as “Being a special state of consciousness”[3]. According to the guidelines of Federal Council of Dentistry (FCD) 2008, any qualified dentist can practice hypnosis after duly completing a certified course in hypnosis[4]. Hypnosis is being recognized as a useful tool in medical and dental field by various



organizations like, the British Medical Association, which recognizes hypnosis as a useful therapeutic tool and recommends that anesthetists should undergo postgraduate training in hypnosis techniques [5].

Even though hypnosis is gaining popularity, it is seldom used, due to the lack of awareness and requirement of additional training for practicing. Hence, assessment of knowledge and level of acceptance of hypnosis among dental professionals to increase its applicability becomes a priority to bridge the gap. But the literature shows scarcity of studies to assess the knowledge and attitude of dentists regarding hypnosis, especially in India, hence the present study aims to evaluate the same to aid in implementation of necessary requirements

2. Objectives:

To assess and evaluate the knowledge, attitude, and practice of general professionals in South India about hypnosis and its applications in Dentistry

- To assess and evaluate the knowledge of general professionals in South India about hypnosis and its applications in Dentistry through a questionnaire.
- To assess and evaluate the attitude of general professionals in South India about hypnosis and its applications in Dentistry through a questionnaire.
- To assess and evaluate the practice of general professionals in South India about hypnosis and its applications in Dentistry through a questionnaire.

Methods

An analytical cross-sectional survey was conducted to assess the knowledge and attitude of general dentists about hypnosis and its applications in dentistry. A self-administered structured questionnaire was prepared under the guidance of experts and was validated by conducting a pilot study with a sample size of 50. The validated questionnaire was mailed to dental professionals practicing in South India, to verified email accounts or Whatsapp. The study received ethical clearance certificate from the Institutional Research Board vide no. VIDS-IEC

Sample Size Determination:

Assuming the proportion of dentists having good knowledge about Hypnosis to be about 50% (as this gives the largest sample size) and with 95% confidence and error of 10%, minimum sample size required is 96 subjects.

Considering a design effect (DEFF) of 2 to adjust for any deviations from simple random sampling, the final sample size will be 192 (96X2=192)

$$\text{Sample size } n \geq \frac{(Z_{1-\frac{\alpha}{2}})^2 P(1-P)}{(d)^2}$$

$Z_{1-\alpha/2}$ - table value for confidence level of 95% = 1.96

P = Proportion of dentists having good knowledge about Hypnosis = 0.5 (50%)

1-P = 1-0.5= 0.5 (50%)

d = Error = 0.10 (10%)

$$n \geq 1.962 \times 0.5 \times 0.5 = 96$$

$$0.102$$

$$N = 96 \times \text{DEFF} = 96 \times 2 = 192$$

The survey was conducted among 192 dental professionals practicing in South India through a self – administered pre-validated questionnaire sent via e-mails or Whatsapp. The questionnaire was sent to 264 respondents and once the required sample was obtained, the questionnaire was blocked for receiving responses. The first question in the questionnaire was to obtain the consent of the participants and then followed by the remaining questions. Convenient and snowball sampling methods were employed to ensure maximum participation. The responses received after the required number of samples were not considered.

The inclusion criteria were Dental Professionals with BDS/MDS degree from authorized universities, registered with the governing bodies with updated contact details and participants consenting to take part in the survey.

Participants who are not currently practising in South Indian states indicated in the survey form



and incomplete or partially filled questionnaires were excluded.

The survey questionnaire included 7 questions on demographic details, 10 on knowledge, 7 on attitude and 8 on practice. The questionnaire was prepared as a google – form and were either mailed or sent through whatsapp to the respondents.

The responses obtained were available in the form of a self-tabulated excel sheets which were subjected to statistical analysis. Chi square test was applied to analyse the statistical difference in the KAP score of participants with a P value of <0.05. Descriptive analysis was done for three questions to know the source of information for attaining knowledge on hypnosis, the reason for not practicing and to know the type of training expected.

3. Results

The statistics of demographic details showed out of the total 193 respondents, 77.2% were female and 22.8% were males. The maximum number of respondents was in 20-30 years age group with 59.6%.

The qualification table of the respondents showed 63.2% with postgraduation, 35.2 with undergraduate degree and 1.6% with MDS and PhD degree. The practice type of the respondents showed, the highest being the practitioners with 36.8% followed by academicians with practice at 28.5%, Post graduates with 24.4% and only academicians at 10.4%.

Table 1 shows the overall scoring of the study with the total of 193 participants. The overall knowledge of the participants was found to be average with 71.5% of the participants falling into the category of average scores. Similarly, majority of the participants showed positive attitude with 72% of them in the average category followed by practice with 81.9% in the average category. Though the result shows the KAP score of the participants to be average the practice or incorporation of hypnosis into clinical practice is poor.

Table 1:KAP score Categories

Knowledge	Poor	50	25.9
	Average	138	71.5
	Good	5	2.6
	Total	193	100
Attitude	Poor	20	10.4
	Average	139	72.0
	Good	34	17.6
	Total	193	100
Practice	Poor	33	17.1
	Average	155	80.3
	Good	5	2.6
	Total	193	100
Overall	Poor	20	10.4
	Average	158	81.9
	Good	15	7.8
	Total	193	100

Table 2 shows overall maximum scoring of the questionnaire for various categories viz., knowledge with 19, attitude with 32 and practice with 13 and mean scores with standard deviation was 9.31 +/- 4.06, 20.23 +/- 7.64 and 5.5 +/- 2.40 for knowledge, attitude and practice respectively. The participants of the study show average knowledge, attitude and practice about hypnosis and its applications in dentistry. The participants of stated various reasons for not incorporating hypnosis into their practice.

Table 2: KAP Score Summary statistics

	N	Mean(S D)	Median(IQ R)	Max
Knowledge score	193	9.31 (4.06)	10 (7-12)	19
Attitude	193	20.23	22 (20-24)	32



score		(7.64)		
Practice Score	193	5.5 (2.40)	6 (5-7)	13
Overall Score	193	35.03 (13.37)	38 (32-42)	57

Table 3 shows comparative evaluation of the knowledge score based on the different demographic parameters assessed in the study. A statistically significant difference was present between the male to female scores for knowledge with a p value of 0.036. The number of female participants were more indicating more patience in female participants to the up the survey.No statistically significant difference was present between the groups of other categories of demographic parameters like age, experience, qualification and practice types.

Table 3: Comparison of knowledge score among participants based on the demographic categories.

		KNOWLEDGE				Chi square
		Poor (%)	Avg(%)	Good(%)	Total(%)	p value
Gender	Female	35 (23.5)	112 (75.2)	2 (1.3)	149 (100)	0.036
	Male	15 (34.1)	26 (59.1)	3 (6.8)	44 (100)	
	Total	50 (25.9)	138 (71.5)	5 (2.6)	193 (100)	
Age group	20-30	32 (27.8)	81 (70.4)	2 (1.7)	115 (100)	0.524
	31-40	12 (21.4)	41 (73.2)	3 (5.4)	56 (100)	
	>41	6 (28.6)	16 (72.7)	0 (0)	22 (100)	

	Total	50 (25.9)	138 (71.5)	5 (2.6)	193 (100)	
Practice Experience	<5	40 (26.7)	106 (70.7)	4 (2.7)	150 (100)	0.783
	5-10	2 (11.8)	15 (88.2)	0 (0)	17 (100)	
	11-20	7 (30.4)	15 (65.2)	1 (4.3)	23 (100)	
	21-25	1 (33.3)	2 (66.7)	0 (0)	3 (100)	
	Total	50 (25.9)	138 (71.5)	5 (2.6)	193 (100)	
Practice Type	Academician	4 (20)	16 (80)	0 (0)	20 (100)	0.284
	Academician + practitioner	11 (20)	41 (74.5)	3 (5.5)	55 (100)	
	Practitioner	24 (33.8)	45 (63.4)	2 (2.8)	71 (100)	
	Post Graduate	11 (23.4)	36 (76.6)	0 (0)	47 (100)	
	Total	50 (25.9)	138 (71.5)	5 (2.6)	193 (100)	

The attitude scores based on the different demographic parameters were depicted in table 4. The results showed no statistically significant difference in the attitude of the participants when different demographic parameters were compared.



Table 4: Comparison of Attitude score among participants based on the demographic categories.

		Attitude				Chi square
		Poor (%)	Average (%)	Good (%)	Total (%)	
Gender	Female	14 (9.4)	109 (73.2)	26 (17.4)	149 (100)	0.699
	Male	6 (13.6)	30 (68.2)	8 (18.2)	44 (100)	
	Total	20 (10.4)	139 (72.0)	34 (17.6)	193 (100)	
Age group	20-30	16 (13.9)	80 (69.6)	19 (16.5)	115 (100)	0.192
	31-40	2 (3.6)	45 (80.4)	9 (16.1)	56 (100)	
	>41	2 (9.1)	14 (63.6)	6 (27.3)	22 (100)	
	Total	20 (10.4)	139 (72.0)	34 (17.6)	193 (100)	
Practice Experience	<5	17 (11.3)	109 (72.7)	24 (16.0)	150 (100)	0.217
	5-10	0 (0.0)	11 (64.7)	6 (35.3)	17 (100)	
	11-20	2 (8.7)	18 (78.3)	3 (13.0)	23 (100)	
	21-25	1 (33.3)	1 (33.3)	1 (33.3)	3 (100)	
	Total	20 (10.4)	139 (72.0)	34 (17.6)	193 (100)	
Practice Type	Academician	2 (10.0)	14 (70.0)	4 (20.0)	20 (100)	0.468

Academician + practitioner	3 (5.5)	40 (72.7)	12 (21.8)	55 (100)
Practitioner	8 (11.3)	55 (77.5)	8 (11.3)	71 (100)
Post Graduate	7 (14.9)	30 (63.8)	10 (21.3)	47 (100)
Total	20 (10.4)	139 (72.0)	34 (17.6)	193 (100)

Table 5 shows the comparative evaluation of practice scores based on the various demographic details. Number of years of experience showed a statistically significant result with a p value of 0.023, while the other parameters were found to be insignificant. Practitioners with more experience were found to be aware of the applicability of hypnosis in dental practice which can be directly implicated to their years of experience in the field.

Table 5: Comparison of Practice score among participants based on the demographic categories.

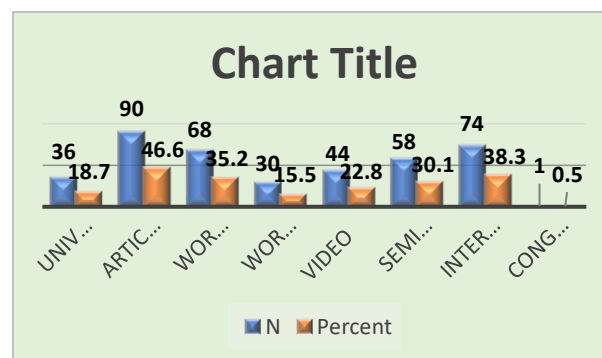
		Practice				Chi square
		Poor (%)	Average (%)	Good (%)	Total (%)	
Gender	Female	22 (14.8)	123 (82.6)	4 (2.7)	149 (100)	0.285
	Male	11 (25)	32 (72.7)	1 (2.3)	44 (100)	
	Total	33 (17.1)	155 (80.3)	5 (2.6)	193 (100)	
Age group	20-30	24 (20.9)	88 (76.5)	3 (2.6)	115 (100)	0.353



	31-40	5 (8.9)	50 (89.3)	1 (1.8)	56 (100)	
	>41	4 (18.2)	17 (77.3)	1 (4.5)	22 (100)	
	Total	33 (17.1)	155 (80.3)	5 (2.6)	193 (100)	
Practice Experience	<5	27 (18.0)	120 (80.0)	3 (2.0)	150 (100)	0.0 23
	5-10	0 (0.0)	15 (88.2)	2 (11.8)	17 (100)	
	11-20	4 (17.4)	19 (82.6)	0 (0.0)	23 (100)	
	21-25	2 (66.7)	1 (33.3)	0 (0.0)	3 (100)	
	Total	33 (17.1)	155 (80.3)	5 (2.6)	193 (100)	
Practice Type	Academician	2 (10.0)	18 (90.0)	0 (0.0)	20 (100)	0.7 94
	Academician + practitioner	8 (14.5)	46 (83.6)	1 (1.8)	55 (100)	
	Practitioner	15 (21.1)	54 (76.1)	2 (2.8)	71 (100)	
	Post Graduate	8 (17.0)	37 (78.7)	2 (4.3)	47 (100)	
	Total	33 (17.1)	155 (80.3)	5 (2.6)	193 (100)	

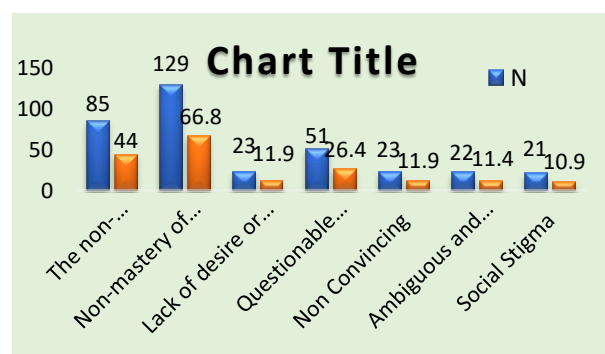
Graph 1 shows the descriptive analysis on the source of information from where the participants had obtained information about hypnosis. The most commonly used source was found to be published articles accounting for 46.6%, followed

by internet at 38.3%, word of mouth at 35.2% and seminars at 30.1%. Videos, university course and workshops at 22.8%, 18.7% and 15.5% respectively with least known source being the congress.



Graph 1: The source of information about Hypnosis

The graph 2 represents the reason for including hypnosis in day-to-day clinical practice. Non mastery of the technique was the most quoted reason and the least was social stigma with 66.8% and 10.9% respectively. The results show the requirement of proper training courses to inculcate hypnosis into clinical practice.



Graph 2: Reason for not practicing Hypnosis.

The pie chart (Graph 3) represents the most opted mode of training to learn about hypnosis to incorporate into clinical practice. The most opted method to learn hypnosis was workshops with 49.7% of participants voting for it and the least opted is university degree with 17.6%. The result gives a clear indication that more workshops to be conducted to train the practitioners followed by



continuing medical / dental education programmes and hypnosis course specific to dentists were given more emphasis.

4. Discussion

Children with dental anxiety are the biggest challenge for Pediatric Dentists to render the required treatment. The level of anxiety may range from patient to patient based on the environment the child has been brought up, race, ethnicity, culture and socio-economic background[6]. Children with increased dental anxiety are the once with dental negligence and require extensive treatment. Appukuttan et al. has showed in his study that around 82.6% of the children had dental anxiety[7].

The increased rate of dental anxiety among children has led to a constant search of psychotherapeutic methods which were found to be effective in reducing patient's anxiety[8]. Hypnosis was found to be one such psychotherapeutic method which is existing from several decades its applications are yet to gain the lime light. The lack of knowledge about hypnosis and its applications may be quoted as the main reason for it's under use. Hence, the present study which was conducted was to assess the knowledge of the general dental practitioner in south Indian states.

The present study showed that the knowledge of the participants was found to be average and had positive attitude towards implementing hypnosis in to their clinical practice, which is contradictory to the results obtained by Sakly EH et al[9]. in their study in which the knowledge of the dentists was found to be poor. The difference in the results can be attributed to large number of young doctors being the participants I the study done Sakly Eh et al. Our study had a mixed pool of participants which included both academicians and clinicians.

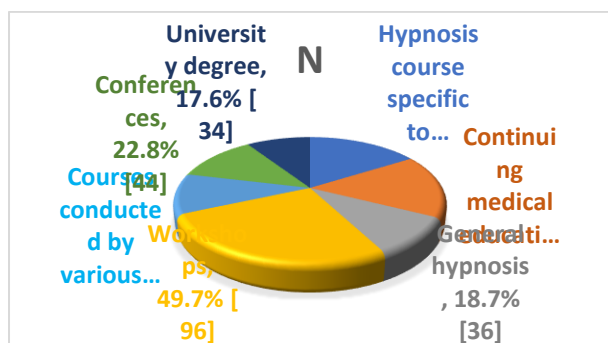
Sophy et al had showed in their study that increase in the knowledge about hypnosis led to a positive attitude and confidence[10] to apply the same in their practice which is in accordance with the present study as the doctors with better knowledge about hypnosis were ready accept hypnosis as a suitable option to be used in clinical practice.

There was a significant difference in the knowledge of female dentists compared to male dentists which may be attributed to more participation from female dentists which in accordance with studies conducted by Sakly Eh Et al.[9], Sophy Et al.[10], and Carvello et al[11].

The attitude of the dental practitioners towards incorporation of hypnosis into clinical practice was more significant with more years of practice when compared to those with lesser years of practice which is in accordance with study conducted by Carvello et al, which showed increased exposure to application of hypnosis increased the knowledge, positive attitude and efficacy of the practitioners despite the cadre [11].

In order to fill the lacunae in knowledge of the practitioners regarding Hypnosis the questionnaire of the study included a question to know the source of information that the dentists are seeking to know about hypnosis. The results of the study showed that articles from scientific journals were the main source of information where as a study conducted by Apoorva Madan et al[12] though showed a similar percentage for articles but the main source in their study was courses and workshops. The results of the present study may be attributed to non-availability of courses and workshops in India.

The reason for not incorporating hypnosis to clinical practice was found to be due to non-mastery of the technique and lack of properly developed courses about hypnosis which was also shown in the study conducted by Carvello et al[11]. The questionnaire of the present study also had question to know the most feasible way to provide the required training according to the participants requirements and was found to be workshops followed by courses tailored for the requirements of dentists which is also supported by the study conducted by Sakly et al which states that the participants require courses formulated to requirements of the dentists as the most opted choice.



Graph 3: Pie chart representing appropriate method to master the practice of hypnosis

Strengths and limitations:

The study involves formulation of a questionnaire to suit the Indian Practitioners through conducting a pilot study for developing the questionnaire. According to the literature search, the present study was found to be the study to be conducted to assess the Knowledge, attitude and practice of Dentists in South Indian States. Strength of the study was that the study not only assessed the KAP of the Dentists but also found out the reason for non practice and the answer to how to improves its application in clinical practice.

The limitations of the study were smaller sample size and being questionnaire survey which was mailed to the participants led to lack of control over the response of the participants which could have led to bias in the results.

Conclusion: Even though the study showed the knowledge of the participants to be average, they demonstrated positive attitude towards application of hypnosis in dentistry and were open to learning more about it. The study also gave the reason for not incorporating hypnosis into clinical practice and what measures have to be taken to improve it.

The future studies on KAP of hypnosis to be conducted with larger samples and either through direct telephonic interviewing or direct collection of information from the participants to avoid the various confounding factors which can influence the result of the study. The study also builds a platform to conducting more workshops and incorporate hypnosis in the curriculum to improve

the application of hypnosis in routine clinical practice.

Clinical significance: Improving the knowledge about hypnosis will help in incorporating hypnosis to the routine clinical practice

Incorporation of hypnosis into the curriculum.

Application of hypnosis will aid in providing quality treatment to the patient in a comfortable zone.

List of abbreviations: KAP – Knowledge, attitude, Practice

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