Knowledge, awareness and attitude of dental professionals regarding child maltreatment

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KEYWORDS

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ABSTRACT

Background: Dental professionals could play a significant role in identifying, documenting and reporting child maltreatment to appropriate authorities as children are exposed to various maltreatments that can present in the head and neck region.

Aim: The aim of this paper is to assess the level of knowledge, awareness and attitude among dental professionals regarding child maltreatment and to identify the barriers that prevent reporting suspected maltreatment.

Methodology: The present cross–sectional questionnaire–based study was conducted on dental professionals practising in India by emailing a self-structured questionnaire to assess knowledge, awareness and attitude regarding child maltreatment.

Results: 422 dental professionals participated in the survey of which 270 were females. A significant difference was observed in mean knowledge (p=.015), awareness (p=.014) score of the participants with regard to place of work and mean knowledge score (p=.024) of the participants with regard to educational qualification. 300 participants reported that lack of adequate knowledge and awareness about the role of dental professionals regarding child maltreatment is one of the major barriers that prevent reporting child maltreatment.

Conclusion: Findings of the study showed that 43.8% of participants had good knowledge and 44.8% were fairly aware regarding child maltreatment. 86.7% of participants showed a very good attitude towards learning more about the role of dental professionals in the management of child maltreatment.

INTRODUCTION

Child maltreatment is a global, social and public health problem that could affect a victim's life without proper treatment.[1,2] Despite being home to 20% of the world's paediatric population and in comparison to many other countries, there is little understanding of trends, extent and magnitude of child maltreatment in India.[3,4] The growing intricacies of life and changes in socio-economic background escalates the exposure of children to several newer forms of abuse.[4] A survey on child abuse by the Ministry of Women and Child Development, Government of India in 2007 publicised that 69% children faced physical, 53.2% sexual and 50% emotional abuse respectively.[5] The literature reported that signs of various types of maltreatment were evident in oral

cavity and 50 – 77% of the abuse cases involved the head and neck region.[6,7] This indicates that dental professionals could play an important role in identifying, documenting and reporting child maltreatment to appropriate authorities.[7] Therefore, it is necessary for dental professionals to have adequate knowledge of child abuse and neglect to address the problem promptly. However, little has been documented in the dental literature regarding the role of dental professionals in recognising and reporting child maltreatment, especially in India. Thus, the aim of this study was to assess the level of knowledge, awareness and attitude among dental professionals regarding child maltreatment and to ascertain the barriers that prevent reporting maltreatment.

METHODOLOGY

The present cross–sectional questionnaire–based survey was conducted on graduate and post-graduate dental professionals practising in India. Ethical approval was obtained from the institutional ethical committee (PGIDS/IEC/2019/42). Sample size was calculated at 95% confidence level and 5% margin of error with web-based research advisors sample size calculator, which came out to be 384. The self-structured questionnaire to assess the knowledge, awareness and attitude of dental professionals with respect to child maltreatment was sent by e-mail. Response by the participants to the questionnaire was considered as their willingness to participate in the study. The link for the survey was live for a period of 9 months from December 2019-August 2020. During this period, 422 participants responded to the survey. A 30-question-based survey was divided into two parts. The first part included questions with respect to demographics of the responding practitioner while the second part comprised questions to assess the knowledge, awareness, attitude and barriers in reporting child maltreatment by the dentists (Figure 1). A correct answer was awarded one point and a wrong answer zero. For questions which included not sure as third option, average marks were awarded when the respondent answered not sure. Based on the participants' scores, knowledge, awareness and attitude were graded into poor (0-25%), fair (26-50%), good (51-75%) and very good (76-100%).

Data obtained was subjected to statistical analysis. The responses obtained for the questionnaire were tabulated and percentage frequency distribution for responses to each question was computed. Parametric data was expressed as mean and standard deviation (SD). One way ANOVA and Post Hoc Bonferroni test were used for analysis. The criterion for significance was $p < .05$.

RESULTS

In the present study, 422 participants responded to the survey. Table 1 shows the participants' demographic details. Among females, mean knowledge, awareness and attitude score±SD was 9.73±2.33, 6.81±2.11and 1.82±.45 respectively. Mean knowledge, awareness and attitude score± SD among males was 9.51±2.45, 6.81±2.37 and 1.89±.31 respectively. No significant difference was observed in knowledge (p=.372), awareness (p=.982) and attitude (p=.080) score between males and females.

With regard to place of work, a significant difference was observed in mean knowledge (p=.015) and awareness (p=.014) score, however no difference was observed in mean attitude score (p=.330) of participants (Table 2). Post-Hoc test for multiple comparison revealed a significant difference between mean knowledge (p=.009) and awareness score (p=.006) of dental professionals working in teaching institutions and private clinics.

With respect to educational qualification, a significant difference was observed in mean knowledge score (p=.024) of participants whereas no significant difference was observed in mean awareness (p=.122) and attitude (p=.549) score (Table 3). Post-Hoc test for multiple comparison revealed a significant difference between mean knowledge score (p=.035) of participants with BDS as educational qualification and participants with MDS/PhD as educational qualification.

No significant difference was observed in mean knowledge (p=.903), awareness (p=.990) and attitude (p=.669) score of participants with respect to work experience (Table 4).

Majority of participants in our study had good knowledge (185), fair awareness (189) and very good attitude (366) towards child maltreatment. (Table 5)

Majority of our study participants were of the opinion that lack of adequate knowledge and awareness about the role of dental professionals (300) is a major barrier in reporting child maltreatment followed by lack of adequate knowledge in identifying (227), lack of knowledge of reporting procedures (220), fear of negative impact on dental practice (116), fear of litigation (106), presence of parents/family members (67) and others (2). The other factor reported by participants was fear of attending court.

Figure 1. Self- Structured questionnaire used in the survey

Part 1—Questions Related to Demographics of the Responding Practitioner	
1.	**Educational Qualification** (you can tick more than one option) a)BDS b)MDS C)PhD d)Fellowship in forensic odontology
2.	**Gender** a) Male b) Female
3.	**Associated with** a)Private Clinics b)Teaching Institution c)Both Clinics and Institution d) Government Hospitals
4.	**Working Experience** a) < 5years b) 5-10 years c) 11-15 years d) > 15 years
Part 2-- Questions to Assess the Knowledge, Awareness, Attitude and Barriers in Reporting Child Maltreatment	
1.	**Are you aware about the role of dentist in identifying the child abuse and neglect** a) Yes b) No c) Not Sure
2.	**Are you aware of the difference between child abuse and child neglect** a)Yes b) No c) Not Sure
3.	**Maltreatment syndrome includes** a) Child abuse b) Child neglect c) Both d) None
4.	**The types of child abuse include (**you can tick more than one option) **a)** Physical abuse b) Emotional abuse c) Sexual abuse d) Munchausen's syndrome by proxy e) All
5.	**Do you know about the general signs/clues of child abuse and neglect** a)Yes b) No c) Not Sure
6.	**If ans to question no.5 is yes, please mention them ----------**
7.	**Do you know about the physical signs/clues of child abuse and neglect identified in oral cavity** a)Yes b) No c) Not Sure
8.	**If ans to question no. 7 is yes, please mention them----------**
9.	**Are you able to differentiate between accidental injuries and injuries because of child abuse** a)Yes b) No c) Not Sure
10.	**According to you, what is the expected /observed behavior of child in dental clinic who had experienced abuse/neglect** (you can tick more than one option) a)Co-operative b)Sullen, Stoic or Withdrawn c) Uncomfortable/skittish with physical contact d) Manipulative e)Not Sure
11.	**Do you know about the role of bite marks in the identification of child abuse** a)Yes b) No c) Not Sure
12.	**Do you know about difference between human and animal bite** a)Yes b) No c) Not Sure
13.	**Do you know about the educational programme, Prevent Abuse and Neglect through Dental Awareness (PANDA) coalition** a)Yes b) No c) Not Sure
14.	**Have you handled any child abuse related case before** a)Yes b) No
15.	**Have you handled any child neglect related case before** a)Yes b) No
16.	**Do you know about the various acts prevalent in India related to prevention of child abuse** a) Yes b) No c) Not Sure
17.	**Do you know where to report the child abuse** (you can tick more than one option) a) Police b) Child welfare societies c) Parents d) Not Sure
18.	**Do you know about the telephonic helpline number (CHILDLINE 1098) to report the child abuse** a)Yes b) No
19.	**Do you know about the protocol regarding documentation and reporting of child abuse and neglect** a)Yes b)No c)Not Sure
20.	**Do you know across the world few countries have made it mandatory for the dentist to report child abuse** a)Yes b) No c) Not Sure
21.	**Are dental professionals in India legally obligated to report child abuse and neglect** a)Yes b) No c) Not Sure
22.	**Do you know in India it is mandatory for medical professionals to report child sexual abuse under POCSO act** a)Yes b) No c) Not Sure
23.	**According to you, what is the main barrier in reporting of child abuse by dental professionals** (you can tick more than one option) a) Lack of adequate knowledge to identify b) Lack of adequate knowledge and awareness about the role of dental professionals c) Fears of a negative impact on dental practice d) Fear of litigation e) Lack of knowledge of reporting procedures f) Presence of parents/family members g) other (please mention)-----
24.	**Did you receive any formal training on child abuse and neglect** a)Yes b) No
	If answer to question 24 is yes, where----------
25.	**Are you willing to attend a training programme on child abuse and neglect** a)Yes b) No
26.	**Do you feel training in diagnosing and reporting child abuse and neglect should be conducted during the bachelors curriculum** a)Yes b) No

Table 1. Demographic details of the participants

Variables		**Frequency n (%)**
Gender	Male	152 (36%)
	Female	270 (64%)
	Total	422 (100%)
Educational Qualification	BDS	116 (27.5%)
	MDS	289 (68.5%)
	PhD	9 (2.1%)
	BDS with fellowship in forensic odontology	2 (0.5%)
	MDS with fellowship in forensic odontology	6 (1.4%)
	Total	422 (100%)
Place of work	Teaching Institutions	105 (24.9%)
	Private Clinics	83 (19.7%)
	Both Private Clinics and Institutions	104 (24.6%)
	Government Hospitals	95 (22.5%)
	Both Teaching Institutions and Government Hospitals	35 (8.3%)
	Total	422 (100%)
Working Experience	< 5years	129 (30.6%)
	5-10 years	136 (32.2%)
	11-15 years	79 (18.7%)
	> 15 years	78 (18.5%)
	Total	422 (100%)

n=Number of Subjects

Table 2. Association of knowledge, awareness, attitude score with place of work

Place of Work		N	Mean ± SD	Range		F-value	p-value
				Minimum	Maximum		
Knowledge Score	Teaching Institutions	105	10.043 ± 2.482	4.0	16.0	3.131	.015 **(S)**
	Private Clinics	83	8.892 ± 2.136	4.0	14.0		
	Both Private Clinics and Institutions	104	9.620 ± 2.354	5.0	14.0		
	Government Hospitals	95	9.858 ± 2.382	5.0	15.0		
	Both Teaching Institutions and Government Hospitals	35	9.800 ± 2.279	6.0	14.5		
	Total	422	9.650 ± 2.370	4.0	16.0		
Awareness Score	Teaching Institutions	105	7.197 ± 2.059	1.8	12.0	3.185	.014 **(S)**
	Private Clinics	83	6.092 ± 1.935	2.0	12.5		
	Both Private Clinics and Institutions	104	6.830 ± 2.321	1.8	12.5		
	Government Hospitals	95	6.942 ± 2.275	2.8	12.5		
	Both Teaching Institutions and Government Hospitals	35	6.926 ± 2.417	2.8	12.0		
	Total	422	6.809 ± 2.206	1.8	12.5		
Attitude Score	Teaching Institutions	105	1.91 ± .314	0	2	1.156	.330
	Private Clinics	83	1.86 ± .387	0	2		
	Both Private Clinics and Institutions	104	1.81 ± .504	0	2		
	Government Hospitals	95	1.81 ± .420	0	2		
	Both Teaching Institutions and Government Hospitals	35	1.86 ± .355	1	2		
	Total	422	1.85 ± .409	0	2		

n- Number of subjects; SD- Standard Deviation; S-Significant
ANOVA

Table 3. Association of knowledge, awareness, attitude score with educational qualification

Educational Qualification		N	Mean± SD	Range		F-value	p-value
				Minimum	Maximum		
Knowledge Score	BDS	116	9.164 ± 2.280	4.0	14.5	3.745	.024 **(S)**
	MDS/PhD	298	9.817 ± 2.394	4.0	16.0		
	BDS/MDS with fellowship in forensic odontology	8	10.500 ± 1.813	8.5	14.0		
	Total	422	9.650 ± 2.370	4.0	16.0		

Awareness Score	BDS	116	6.521 ± 2.0849	2.0	12.0	2.112	.122
	MDS/PhD	298	6.894 ± 2.2561	1.8	12.5		
	BDS/MDS with fellowship in forensic odontology	8	7.850 ± 1.547	5.5	10.0		
	Total	422	6.809 ± 2.206	1.8	12.5		
Attitude Score	BDS	116	1.84 ± .372	1	2	.601	.549
	MDS/PhD	298	1.85 ± .427	0	2		
	BDS/MDS with fellowship in forensic odontology	8	2.00 ± .000	2	2		
	Total	422	1.85 ± .409	0	2		

n- Number of subjects; SD- Standard Deviation; S-Significant
ANOVA

Table 4. Association of knowledge, awareness, attitude score with work experience

Work Experience		**N**	**Mean ± SD**	**Range**		**F-Value**	**p-value**
				Minimum	**Maximum**		
Knowledge Score	<5years	129	9.601 ± 2.307	5.0	14.5	.190	.903
	5-10 years	136	9.761 ± 2.298	4.0	15.5		
	11-15 years	79	9.665 ± 2.648	5.0	16.0		
	>15 years	78	9.526 ± 2.335	5.5	14.5		
	Total	422	9.650 ± 2.370	4.0	16.0		
Awareness Score	<5years	129	6.762 ± 2.190	1.8	12.5	.038	.990
	5-10 years	136	6.821 ± 2.127	1.8	12.5		
	11-15 years	79	6.810 ± 2.208	2.8	12.5		
	>15 years	78	6.865 ± 2.400	1.8	12.5		
	Total	422	6.809 ± 2.206	1.8	12.5		
Attitude Score	<5years	129	1.82 ± .458	0	2	.519	.669
	5-10 years	136	1.84 ± .425	0	2		
	11-15 years	79	1.89 ± .320	1	2		
	>15 years	78	1.87 ± .373	0	2		
	Total	422	1.85 ± .409	0	2		

n- Number of subjects; SD- Standard Deviation
ANOVA

Table 5. Categorization of knowledge, awareness and attitude based on scores obtained by participants

	Poor n (%)	Fair n (%)	Good n (%)	Very Good n (%)
Knowledge	2 (0.5%)	178 (42.2%)	185 (43.8%)	57 (13.5%)
Awareness	21 (5.0%)	189 (44.8%)	184 (43.6%)	28 (6.6%)
Attitude	8 (1.9%)	48 (11.4%)	0 (0.0%)	366 (86.7%)

n=number of subjects

DISCUSSION

Child maltreatment is defined as the abuse and neglect that happens to children below 18 years of age and it includes "all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment or commercial or other exploitation, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power".[3,8] Maltreatment syndrome collectively includes both child abuse and neglect and is considered to happen when a child is treated in a manner that is unacceptable for a particular culture at a given time.[9] In the present study, 328 (77.7%) participants knew that both child abuse and neglect are components of maltreatment syndrome whereas 51 (12.1%) and 21 (5.0%) participants considered only child neglect and child abuse respectively as a component of maltreatment syndrome. 13 (3.1%) participants opted none as an answer whereas 9 (2.1%) refrained from answering the question reflecting that they were not sure about the components of maltreatment syndrome. Our study findings were in association with those of Archana et al.[10] where 80.6% participants were aware of child maltreatment (abuse and neglect).

Child abuse is defined as any non-accidental injury, failure to meet basic requirements or abuse levied upon a child by the caretaker that is beyond the acceptable norms of childcare in a particular culture, although neglect refers to the failure by the caregiver to provide necessary, age-appropriate care being financially able to do so or failure to guard the child from situations or actions that compromise the physical or mental health of the child, when able to do so.[9,11] 327 participants in our study reported that they knew about the difference between child abuse and neglect (Table 6). The types of child abuse reported in the literature are physical, emotional, sexual abuse and Munchausen syndrome by proxy and these forms of child abuse generally occur in combination.[9] 307 out of 422 participants were aware of these whereas 89 considered physical, emotional and sexual abuse as the only types of child abuse. (Figure.2) Soumya Mohanan et al. in her survey stated that 80% participants had knowledge about types of child abuse (physical, emotional and sexual) and neglect.[12]

Dental professionals could play an important role in identifying, documenting, reporting and referring with regard to child abuse and neglect.[13] 323 (76.5%) participants were aware of the role of dental professionals in identification of child abuse and neglect (Table 6). In a study by Malpani et al. 32.81% and 63% of the participants strongly agreed and agreed respectively that dental professionals had an important role in identifying and reporting child abuse.[11]

Our survey showed that 185 (43.8%) participants were not sure whereas 181 (42.9%) knew about the general signs of child abuse and neglect (Table 6) which were slightly higher than Soumya Mohanan et al.'s study where 34.3% participants had knowledge of the signs of child abuse and neglect.[12] However, Sharma et al.[14] in their study reported that 80.3% BDS and 82.6% MDS participants were confident that they could recognise indicators of domestic violence and child abuse in their patients. The majority of participants in our study reported physical indicators (bruises, bite marks) and behavioural indicators (shy, depressed and fearful child) as general signs of child abuse and neglect.

Accidental injuries to the cranio-facial region and oral cavity should be differentiated from abusive injuries, by confirming whether the history, timing, pattern and mechanism of the injury is in association with the injury type and child's developmental abilities or not.[15] 211 (50%) participants in the present study affirmed that they could distinguish between accidental injuries and injuries because of child abuse (Table 6), however, 89.7% of general dental practitioners in study by Kaur et al.[7] affirmed that they were capable of distinguishing accidental injuries from

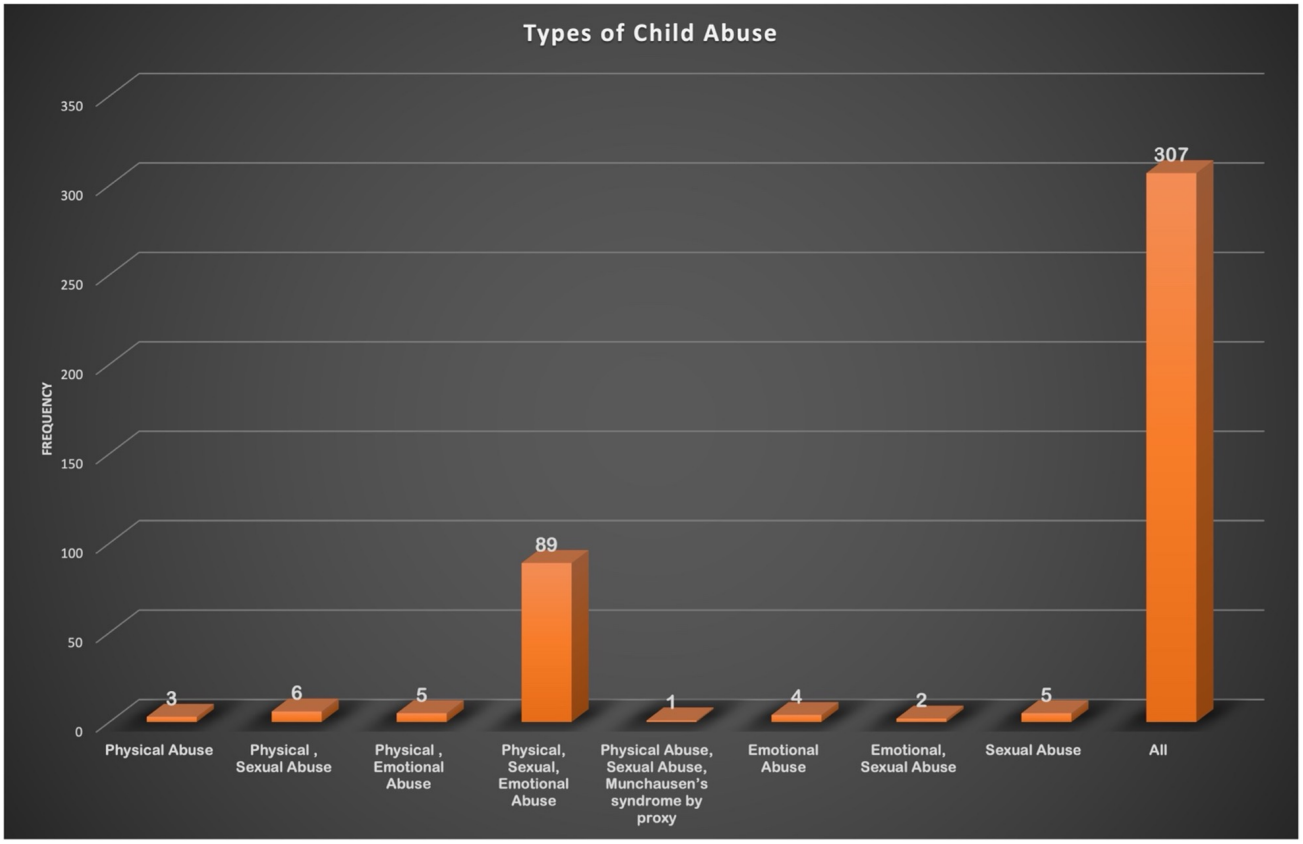
physical abuse. This difference could be explained on the basis that 55% participants in their study were associated with an academic institute and our study showed a significant difference between the knowledge and awareness score of participants working in teaching institutions and private clinics. In addition, the literature reported that guild associated dental professionals have access to a higher number of patients and are suitably prepared to deal with such a situation.[7] Kaur et al.[7] reported that dental professionals with more years of experience have greater ability to differentiate between accidental and abuse-related injuries whereas our study did not observe any significant difference with regard to work experience.

Table 6. Frequency of responses to questions

S.No	Questions	Yes	No	Not Sure
1	Aware about the role of dentist in identifying the child abuse and neglect	323 (76.5%)	37 (8.8%)	62 (14.7%)
2	Aware of the difference between child abuse and child neglect	327 (77.5%)	37 (8.8%)	58 (13.7%)
3	Know about the general signs/clues of child abuse and neglect	181 (42.9%)	56 (13.3%)	185 (43.8%)
4	Know about the physical signs/clues of child abuse and neglect identified in oral cavity	173 (41.0%)	83 (19.7%)	166 (39.3%)
5	Able to differentiate between accidental injuries and injuries because of child abuse	211 (50.0%)	68 (16.1%)	143 (33.9%)
6	Know about the role of bite marks in the identification of child abuse	320 (75.8%)	32 (7.6%)	70 (16.6%)
7	Know about difference between human and animal bite	300 (71.1%)	47 (11.1%)	75 (17.8%)
8	Know about the protocol regarding documentation and reporting of child abuse and neglect	50 (11.8%)	257 (60.9%)	115 (27.3%)
9	Know about the educational programme, Prevent Abuse and Neglect through Dental Awareness (PANDA) coalition	90 (21.3%)	248 (58.8%)	84 (19.9%)
10	Know about the various acts prevalent in India related to prevention of child abuse	86 (20.4%)	199 (47.1%)	137 (32.5%)
11	Know across the world few countries have made it mandatory for the dentist to report child abuse	129 (30.6%)	190 (45.0%)	103 (24.4%)
12	Are Dental professionals in India legally obligated to report child abuse and neglect	121 (28.7%)	52 (12.3%)	249 (59.0%)
13	Do you know in India it is mandatory for medical professionals to report child sexual abuse under POCSO Act	189 (44.8%)	101 (23.9%)	132 (31.3%)
14	Know about the telephonic helpline number (CHILDLINE 1098) to report the child abuse	186 (44.1%)	236 (55.9%)	-
15	Handled any child abuse related case before	42 (10.0%)	380 (90.0%)	-
16	Handled any child neglect related case before	73 (17.3%)	349 (82.7%)	-
17	Did you receive any formal training on child abuse and neglect	18 (4.3%)	404 (95.7%)	-
18	Are you willing to attend a training programme on child abuse and neglect	376 (89.1%)	46 (10.9%)	-
19	Do you feel training in diagnosing and reporting child abuse and neglect should be conducted during the bachelor's curriculum	404 (95.7%)	18 (4.3%)	-

For question no. 14-19, Not Sure was not an option in questionnaire

Figure 2. Graph depicting responses to question on types of child abuse



173 (41.0%) participants acknowledged that they knew about the signs of child abuse and neglect observed in the oral cavity whereas 166 (39.3%) were not sure about the same (Table 6). A staggering 83% were familiar with physical signs of child abuse and neglect in a study by Archana et al.[10]

Bite marks are usually seen in association with violent fights, child abuse and sex crimes.[16] Examination of bite marks as evidence is based on the fact that dentition of the biter (animal or humans) is unique and results in a distinct and unique pattern.[17] Dental professionals must be observant enough to perceive most abuse-related bite marks as 43% of them are noticed in the head and neck region and 65% of bite marks related with abuse can be observed while the child is wearing clothes.[4] 320 (75.8%) study participants reported that they knew about the role of bite marks in child abuse and 300 (71.1%) stated that they could differentiate between animal and human bites. Sharma et al. reported that 76% BDS and 84% MDS participants had knowledge about bite mark patterns.[14]

The literature reports that children who had experienced abuse/neglect might act in different ways in dental clinics, so dental professionals should be aware of these presentations. Our study participants were of the opinion that the most expected behaviour from a child who had experienced abuse was that child might feel uncomfortable/skittish with physical contact (306) followed by sullen, stoical and withdrawn (197), manipulative (22) and co-operative (20) whereas 41 were unsure about the expected behaviour. The majority of participants of a study conducted by Kaur et al.[7] reported that child may be uncooperative (45.5%) followed by co-operative (24.8%), stoical (23.8%) and aggressive (5.3%).

In case of suspicion of child abuse, dental professionals should follow an accurate protocol for documenting and reporting. Child and parents should be interviewed separately in the presence of a witness to ascertain whether the manifestation of injury relates to its history and cause or not and if the explanation given by both are in association or not. Further, all relevant information should be documented with photographs, radiographs and impressions when required.[9,16] 257 (60.9%) participants did not know about the accurate protocol to be followed

to report child abuse and neglect. (Table 6) Bandi et al. reported that 48.7% of study participants knew the exact mechanisms to report child physical abuse.[2]

Child abuse can be reported to the local Child Welfare Committee, the police, child helpline or local NGOs.[18-19] The literature revealed that ideally, a case of child abuse should first be reported to the childcare authorities, as in many cases parents are directly involved.[20] According to participants in our study the main avenue to report a case of child abuse was child welfare societies (272) followed by police (196) and parents (123) whereas 85 were not sure about it. Malpani et al.[11] in their study reported that, 47.5% participants thought that it should be reported to police followed by Childline (21.7%), social agencies (17.3%) and Ministry of Health (4.3%). 41% of participants in the study by Sahni et al.[20] affirmed that they would report to parents and all of them supported reporting the case to the police and only 18% were in favour of reporting the case to childcare authorities. 236 (55.9%) participants in our study were not aware of 24-hour free child helpline phone service (1098) (Table 6) which was in contrast to the findings of Archana et al.[10] where 59.2% were aware of this helpline number.

The majority of the participants in our study did not handle any case of child abuse (380) and neglect (349) (Table 6) which was in association with Malpani et al.[11] where 7.2% participants affirmed that they suspected a case of physical abuse in the past. Kaur et al.[7] reported that 60% participants had witnessed at least one case of child abuse during their practise.

A dental professional should be familiar with the laws associated with child abuse of respective countries. 199 (47.1%) participants of our study did not know about the various acts prevalent in India related to prevention of child abuse (Table 6). In a study by Deshpande et al. 51.2% dental and 39.3% medical residents were not aware of the Indian laws related to child abuse.21 However, 68.2% of the dental professionals in another study were aware of laws to prevent child abuse.[7] Numerous developed countries have well-developed child protection systems which mainly focus on identification, investigation, mandatory reporting and often take strong action.22 190 participants of the present study did not know that few countries have made it mandatory for dental professionals to report child abuse. 249 participants were not sure whether dental professionals in India are legally obligated to report child abuse or not (Table 6). However, Malpani et al.[11] and Kaur et al.[7] reported that 90.3% and 94% of participants in their studies believed that it is dentist's legal responsibility to report child abuse and neglect. POCSO Act (2012) has made it compulsory for doctors, parents and school personnel to report child sexual abuse to the law enforcement authorities.18,23 189 (44.8%) study participants affirmed they knew that medical professionals are mandated to report child sexual abuse under POCSO Act (Table 6) which was in contrast to the results by Archana et al.10 where 77.4% participants reported that failure to report a case of child abuse forms an offence under POCSO Act.

An educational programme PANDA (prevent abuse and neglect through dental awareness) Coalition introduced in 1992 in Missouri requires dental professionals to complete a two-hour programme in identifying and reporting child abuse as a requirement of relincesure.[9] 248 (58.8%) participants in our study were unaware of the PANDA Coalition (Table 6).

A study by Human Rights Watch in India reported that no doctor has been given any training regarding child abuse examination, interviewing, handling, rehabilitation and the medical and psychological needs of the child.[22,24] The majority of the dental professionals (404) in the present study reported that they did not receive any formal training in child abuse and neglect (Table 6). Participants who had knowledge, received training during their master's course (MDS or fellowships) or through conferences/CDE which became evident by a significant difference in the knowledge score of participants with regard to educational qualification. In contrast to our findings, Kaur et al. [7] reported that 54.1% of participants in their study did not receive any training in child abuse during the academic curriculum. In 2002, all dental schools in the United States and Canada included the education of child abuse in their curricula.[25] 404 (95.7%) participants in the present study thought that training in diagnosing and reporting child abuse and neglect should be conducted during the bachelor's curriculum (Table 6) which was in association to the study by Marengo et al.[26] where 93.7 % of participants reported that identification and mechanism of

reporting child physical abuse should be part of vocational training course.

89.10% of the dental professionals in the present study were willing to attend the training programme on child abuse and neglect which was in corroboration with the study by Bandi et al. where 84.8% of participants wanted more training in identification and the mechanism to report child physical abuse.[2]

The major barrier according to the participants of the present study in reporting child abuse and neglect was lack of adequate knowledge and awareness about the role of dental professionals. Kaur et al.[7] also reported that lack of knowledge was a major barrier whereas according to Soumya Mohanan et al.[12] lack of knowledge in referral procedure was the main factor which prevented the dental professionals reporting child abuse.

The strength of the current study is that it was conducted on dental professionals practising in India and participants from all the sectors (private clinics/government hospitals/academic institutions) participated whereas other studies were conducted either on dental professionals practising in academic institutions only or in particular cities only. Furthermore, as the study is a questionnaire-based study, so bias in filling the responses could occur if the identity of participants is known to the researcher. To avoid bias, we conducted an anonymous survey in which even researchers were unaware about the identity of participants. Our study scored the responses and compared the mean score which to the best of our knowledge has not been performed in any other study.

CONCLUSIONS

Dental professionals continue to under-report child maltreatment; thus, they must be inspired to become more aware of their moral, ethical and legal responsibilities in identifying and reporting child maltreatment. The findings of our study point towards a serious need to include training in child maltreatment during bachelor's curriculum and then augmentation of knowledge through workshops/CDEs during continuing professional life.

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