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AWARENESS TOWARDS CHILD ABUSE AMONG DENTAL STUDENTS AND THEIR POSSIBLE ROLE IN ITS MANAGEMENT: A KAP STUDY

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Abstract

Introduction: *Dentistry has a lot to offer to law enforcement agencies and the society in the detection and solution of the crime against child. Oral cavity inspections give enough clue to rule out any mistreatment. It is therefore the need of the hour for upcoming dental practitioners to possess sound knowledge about child abuse and its judicial applications.*

Aims and Objectives*: The present study was undertaken to analyse and assess the awareness of child abuse among budding practitioners.*

Materials and Methods*: A cross-sectional study was conducted among 250 dental students of Babu Banarasi Das College of Dental Sciences. Data was collected via a google questionnaire.*

Result: *The overall result revealed inadequate knowledge and awareness regarding signs and symptoms of Child abuse and neglect (CAN), among the budding dental surgeons.*

Keywords: *Child abuse, Mistreatment, Upcoming, Judicial applications, Inadequate knowledge, Awareness*

INTRODUCTION

Child abuse and neglect (CAN) is a grim reality worldwide which scars the sufferers for a lifetime (Malpani et al., 2017). It is classified under four categories: emotional (psychological), physical, sexual (pornography, unacceptable dirty talks, bad touch, or intercourse) and neglectful (avoidance or rejection) (Markovic et al.,2015). According to the Centre for Disease Control and Prevention (CDC) child maltreatment is "any act or series of acts of commission or omission by a parent or other caregiver that results in harm, potential for harm or threat of harm to a child" (Patil et al., 2017, p.74). According to WHO, "child abuse or maltreatment constitutes 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 (Gonzalez et al.,2021, p.1). Literature confirms > 60%–75% of child abuse victims present with head and neck injuries. (Singh & Lehl, 2020) Moreover, oral cavity inspections help rule out any mistreatment to the child; for which dentists should be the obvious choice. Dental surgeons can play an active role in advising law enforcement agencies & the society in detection and solution of these crimes (Sinha et al.,2021). It is therefore the call of the hour for budding dental surgeons to develop sound knowledge on child abuse and its legal implications. The purpose of this study was to assess knowledge and awareness towards signs and symptoms of CAN and reporting procedures among budding dental surgeons.

MATERIALS AND METHODS

This cross-sectional study was conducted among 250 dental students of Babu Banarasi Das College of Dental Sciences. Data was collected through a google based questionnaire that consisted of 15 questions (14 MCQ+1 subjective) adopted and modified from previous studies Malpani et al. (2017) & Markovic et al. (2015). The questions were framed to asses KAP criteria. MCQ's were scored from 1 to 4, the most significant answer being score++++ and the least significant being score + (Table1). An integrated tabulation was done with the questions, responses and their scores (Table2). Data was analysed using frequencies and percentages from responses to each question. The results were presented as charts and tables.

Table 1: **Evaluation criteria**

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Response Scale	Inference
Score ++++	Adequate knowledge
Score +++	Partial knowledge
Score ++, Score +	Inadequate knowledge

Result

Of the 47.6% participants who responded, only 33.34% correctly identified all signs of child abuse and 34.4 % knew the protocol of reporting. (Figure 1). Table 2 depicts the graded responses to each question.

Table 2: ***All the questions, response and scale and result of each question***

	Questions	Score	% Of Responses	Results
1	Bite marks can be a sign of			
	a) Uncontrollable anger by the adult or another child	++++	48.7%	Adequate knowledge
	b) Sexual abuse	+++	46.2%	
	c) Normal way of showing love by parents	+	2%	
	d) Self-infliction by child	++	6%	
2	Neck Bruises are usually associated with			
	a) Physical abuse	+++	63.9%	Partial knowledge
	b) Sexual abuse	++++	30.3%	
	c) Neglect of child	++	2.8%	
	d) Self-inflicted	+	3%	
3	Bilateral Burns/bruises at the commissures indicate			
	a) Forceful feeding	++	31.1%	Adequate knowledge
	b) Accidental trauma	++++	37%	
	c) Gagging with a cloth/ rope	+++	21.8%	
	d) Self- inflicted	+	10.1%	
4.	Scars of lips, tongue, palate or lingual frenum may indicate			
	a) Forceful feeding	+++	31.1%	Adequate knowledge
	b) Oral Sexual abuse	++++	37%	
	c) Physical abuse	++	21.8%	
	d) Accidental trauma	+	10.1%	
5.	Which of the following lesions can be clue to forceful sexual abuse			
	a) Fibroma	+++	26.9%	Adequate knowledge
	b) Papilloma	++++	40.3%	
	c) Lichen Planus	++	26%	
	d) Leukolakia	+	6.8%	
6.	If a parent describes a serious injury to child as self-inflicted, it is indicative of			
	a) Physical abuse by caregiver	++++	18.5%	
	b) Physical injury by siblings	+++	4%	

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	c) Accidental trauma	++	1%	Inadequate knowledge
	d) All	+	76.5%	
7	Which of the following could be indicators of suspected child abuse and neglect			
	a) Disoriented behaviour	++	42.9%	Inadequate knowledge
	b) Avoiding eye contact	+++	38.7%	
	c) Untidy appearance	+	4.1%	
	d) Showing inappropriate anger	++++	14.3%	
8	8.An inconsistent explanation of injury to child by a parent is sign of			
	a) Neglect	++	3%	Partial knowledge
	b) Physical abuse caused by parents	+++	66%	
	c) Sexual abuse by relatives	++++	30%	
	d) None	+	1%	
9	Child taken off an abusive situation should be			
	a) Let free in public	+	4.5%	Partial knowledge
	b) Put up with the individual who helped them	++	9.2%	
	c) Exposed to a new environment	++++	13.4%	
	d) Counselled	+++	73.9%	
	e) If Other; specify:		0%	
10	People who sexually abuse children			
	a) Do not belong to the child's family but are familiar	+++	14.3%	Inadequate knowledge
	b) Complete strangers	++	0.8%	
	c) Belongs to the child's family	++++	20.2%	
	d) Anyone	+	64.7%	
11	Only girls are victims of sexual abuse			
	a) Yes	+	2.5%	Adequate knowledge
	b) No	+++	76.5%	
	c) Can be situational	+	16%	
	d) Depends on socioeconomic status	++	5%	
12	Can you identify the type of abuse a child is going through			
	a) Physical	++++	13.4%	Inadequate knowledge
	b) Emotional	++	0.4%	
	c) Sexual	+++	3%	
	d) All	+	83.2%	
13	What would you do if you identify signs/ symptoms of child abuse?			
	a) Report to parents	+++	13.4%	
	b) Report to police/ agency	++++	7.5%	

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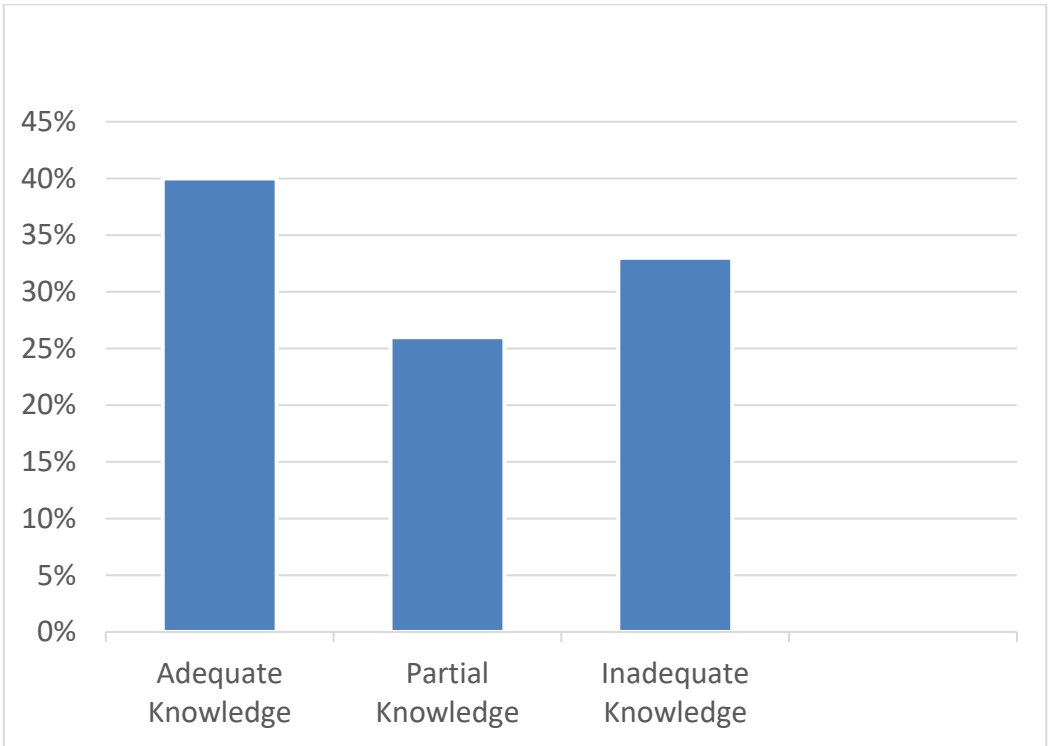
				Inadequate knowledge
	c) Report to both	+++	78.2%	
	d) Keep quiet	+	0.9%	
14	Do you know how to report child abuse			
	a) Yes	++++	34.45	Partial knowledge
	b) No	++	22.7%	
	c) Partially	+++	42.9%	
	d) Reporting is not dentist job	+	0%	
15	If yes please mention in few words			
	Common answers by students in subjective form:			
	• National child abuse hotline and child welfare agencies • can be contacted	++++	20%	Partial knowledge
	• First report to police then child welfare agencies	+++	50%	
	• Talk to child first, followed by their Parents and take strict action	++	20%	
	• I don't know how to report	+	10%	

Figure 1: ***Percentage of all the responses.***



Note: **I**nadequate knowledge –40%, Partial knowledge-26.66%, Adequate knowledge-33.34%

DISCUSSION

Protection against violence, abuse, and exploitation is a birth-right of every child (UNICEF, 2022, article 19). Abuse can be mental, physical, or sexual; exerted by a parent, caretaker, extended family member or someone familiar and hence goes unnoticed and unreported (Lim et al.,2021). However, in the court of law it is a heinous crime which demands swift identification, thorough reporting and strict action. Majority of child victims report

injury to the head and neck which makes a dental surgeon the best judge. Regular paediatric dental check-ups not only give the dentist an opportunity to easily communicate with a child & the parent but also helps evaluate the physical and psychological growth and development.

Sometime in their lives, each child may have experienced assaults which are physical, sexual or emotional. Simple actions like a slap, kick, bite or shove as well as forced actions like drug abuse, physical restraints, burns, strangulations, unwarranted touching, attempted sexual acts, exposure to pornography, and taking unwanted images account to various categories of child abuse

Of the 250 participants, 119 responded in the present study. The smaller number of participation clearly indicate that students are unaware of the significance of identifying and managing child abuse cases which is crucial in a dental practice.

Crimes commonly associated with **biting** are homicide, rape, sexual assault, robbery, and child abuse (Afsin et al.,2014). Hence, recognition of the locations and characteristics of bite marks will assist to solve the crime. Deep bite marks can be anger-impulsive which often result from frustration and incompetence in dealing effectively with conflict situations. It can be inflicted by siblings during a fight or can be associated with sexual abuse. Human bites associated with sexual assault occur mostly on the face, lips, neck, shoulder, breasts, thighs, genitals and testicles; and those associated with other forms of physical assault may be seen on any part of the body while self- inflicted wounds affect mostly the distal portions of the upper limb (Robsam et al., 2018).

In our study, ~48% of participants correctly identified bite marks and the most correct reason to its cause. The result was consistent with the study conducted by Afsin (2014) & Robsam (2018). We suggest that dental students must undergo practical training to identify human bites by registering bites on materials like wax and silicone. This will aid in identifying the mark that can be left by a human incisor, canine etc; also, if there is a tooth missing or fractured in the attacker's anterior quadrant that can be clearly visualised in the bite mark. Such expertise can be developed by the dentist only through meticulous training.

Bruising is a frequent injury sustained by children who are physically abused (Petska et al.,2021). Bruises on the neck are rare; and so is its literature; nevertheless, it is alarming. Parents and caregivers tend to physically punish the child by holding their neck; bullies at school tend to follow suit too. Inspection of the child's neck will give away tell-tales in the form of bilateral finger/ nail prints. Bruises of sexual abuse are observed in the form of blood clots that may be the result of sucking and forceful kissing; both events of negative pressure. Strangulation can also leave bruises on the neck, which may be self-inflicted or otherwise (Dunn et al.,2022). In the current study, 63.9% of students reasoned bruises as sign of physical abuse and only 30.3% related it to sexual abuse; none thought of self- inflicted causes. However, we believe self- inflicted reason for neck bruises is a matter of concern as it can help in ruling out a child with suicidal mindset. Our observations suggest that a dental student should be trained to have a keen eye to notice slight alteration if any in the oral soft tissues as well as skin relevant to the area.

Burns or bruises in the commissures of mouth are commonly inflicted using blunt objects, gagging or forceful sex (Costacurta et al.,2015). Blunt objects like a spoon, which is used to regularly feed the child may be inserted forcefully into the mouth out of anger when they refuse to eat. When involuntarily inflicted during procedures, like eating hot food or using sharp utensils for taking a morsel; the involvement of commissures may not be bilateral. Gagging a child by forcing an object/ corner of the attacker's palm may manifest only bruises; no cuts. Gags due to forceful oral sex may result in bruises in corner of mouth and soft palate. 68.9% of the students picked gagging as the reason of bruises and burn on commissures of the mouth which was similarly documented by Costacurta et al. (2015). Bruises, abrasions or lacerations of oral soft tissues can be sign of physical abuse by parents (forceful feeding), self-inflicted or accidental play time trauma. Forceful oral sex as most probable reason cannot be overlooked.[14] However, in case of physical, accidental or self-inflicted abuse, the trauma will be seen only in few areas; whereas multiple scars on the lips, tongue and palate & lingual frenum indicates forceful oral sex; which is supported by Toon. et al (2011). Only 37% of students in our study believed soft tissue injuries were due to forceful sexual abuse rest assumed it as physical abuse; which indicates the low level of knowledge towards sexual predatory habits.

Oral cavity is a frequent site of **sexual abuse** in children where oro-genital contact is accompanied by Gonorrhea, Papilloma, Human Papilloma Virus, Chlamydia, Syphilis and HIV (Cunhaet al.,2021). Though aforementioned lesions clearly indicate sexual abuse; papilloma can occur even otherwise. Recurrent papillomas point towards sexual abuse (Benyo et al.,2021). Lichen planus is rarely reported in children but Pandhi D (2014) reported occurrence of OLP in children related to stress (Pandhi et al.,2014). We strongly believe more studies should be undertaken in children with OLP and be correlated with child abuse; as stress has already been listed as a primary reason. In the current study, >40% of respondents were aware of sexually transmitted oral lesions. To summarize, our participants couldn't adequately identify sexual predatory habits; but were aware of STD's in oral cavity.

Physical abuse inflicted by siblings while playing or fighting are often disclosed by parents; however, if the same is done by the parent themselves due to substance abuse/ addiction, marital problems etc they hesitate to share the information or may misguide the dentist. Similar cases were reported by Arthur et al. (2014) and Manos et al. (2009). Dosari et al. (2017) reported that among 220 child victims who participated in their study, 47% were of physical abuse, 32% were of neglect, 13% of sexual abuse, and 8% were emotionally abused; most common

perpetrators were parents. However, in the present study our participants had little knowledge of the same Only 18.5% knew that if a parent describes a serious child injury as self-inflicted, the real culprit could be parents themselves. Inconsistent explanation of injury to child is clear cut sign of sexual abuse. Parents often refuse to expose child abuse, because disclosure brings shame to the child and family and not the accuser (Robsam et al., 2018). Schomerus et al. (2021) stated that victims of childhood trauma report shame and anticipation of stigma, leading to non-disclosure and avoidance of help. Stigma further aggravates the mental health consequences (Garrocho-Rangel et al.,2015). 66% participants in our study responded that an inconsistent explanation of injury to child is sign of physical abuse caused by parents and not the sexual abuse by others.

Identifying child abuse by observation of scars on the body is easier but it takes a keen eye to rule out abusive child by **behaviour orientation**. Every maltreated child behaves differently. The most common behavioural change is that of the child showing inappropriate anger, due to the agony by the act. Such children also avoid eye contact probably due to submissive behaviour. Disoriented behaviour is yet another manifestation; although can be seen in syndromic children. These findings were in agreement with Odhayani et al.,(2013). In our study too, it was difficult for participants to assess behavioural changes of an abusive child. According to 42.9% of participants disoriented behaviour was key to identify an abusive child and 38.7% thought such child will avoid eye contact and only 14% thought it to be inappropriate anger. Few responders also thought that such child will remain untidy. However, untidy appearance of the child may be due to neglect by parents. A dentist should be holistically trained to identify physical signs of abuse and also correlate with behavioral alterations of not only the child but also of the guardian. Child psychology should be given emphasis. Interdepartmental deliberations will give the dental student clarity of forensic and pediatric aspects of the situation.

Once identified successfully, it is imperative for a dentist to be aware **how to deal with a child** who has been taken off an abusive situation. Sperry DM (2013) opined that social/ extra-familial support can help improve a child's abilities to cope with life stresses and enhance their mental and physical well-being (Sperry et al.,2013). We also strongly believe it is important to expose the victim to a new environment with positive vibes to gradually fade the past-painful experiences away. Once normality sets in, counselling can be commenced. After buffering a child with trust, they can be exposed to extended family and public. In our study only 13% knew the correct approach; majority believed counselling was enough. Every parent regardless of socioeconomic/ educational status ensures to entrust the child in trusted hands. It is the familiarity of the abuser that works in their favour (Sharma et all.,2019) & Paul et all.,2021). According to Odhayani et al. (2013) for every 100000 people younger than 18 years of age, 334 were victims of physical or sexual violence by friends or acquaintances, 187 experienced violence from family, and 101 were victimized by strangers. Our respondents thought otherwise; where 64.7% opined that the abuser can be randomly anyone.

76.5% students were aware that not only girls but boys are also sexually abused. A meta-analysis estimated 7.9% of males and 19.7% of females universally faced sexual abuse before 18 years of age (Tyagi et al.,2021). Individuals with a bisexual orientation when abusive towards the child can be difficult to detect. We staunchly believe that irrespective of the child's gender, parents should remain vigilant.

Identification of child abuse can be challenging. MC Tavish et al. (2020) mentioned that most of the health workers affirm their sparse knowledge about strategies to accurately identify children potentially exposed to maltreatment without training. Few studies also mention that experienced doctors may also find it tough to identify emotional abuse without proper training. However, 80% students in our survey did mention that they can identify all types of abuse. It clearly shows that these budding dentists were ignorant about of the gravity of the subject and challenges they can face in their clinical practice. Identification of the abuse and exact procedure of reporting, is equally important. Questions pertaining to the same attracted only 20% correct answers in the current study. According to Murray et al. (2014) Child Protective Services (CPS), police, legal & medical teams, foster care and child welfare agencies, and/or residential treatment facilities are involved in strategizing post identification management. CPS is responsible for the investigation and intervention in cases of suspected sexual abuse whereby the offender is a caregiver. Law enforcement agencies are responsible for investigation of cases involving offenders in non-caretaking roles. Garrocho-Rangel et al.(2015) reported that after recording detailed history, doctors should directly inform the agencies regarding the abuse, as the culprit often belongs to the family. Majority of our respondents believed that informing parents and lodging an FIR is the right approach, which may not hold true in all situations.

In a nutshell, the study clearly indicates that the participants had meagre knowledge about detecting physical signs of child abuse. On the other hand, only few of them were able to identify sexual abuse through oral symptoms which reinforces the need for emphasis in education towards this problem. We also noticed that students only possessed theoretical knowledge regarding child abuse; pragmatic experience was lacking. To justify the results, we also referred similar studies documented so far Malpani et al. (2017) & Markovic et al. (2015). We would like to emphasize more often than not, that child abuse may not be directly aimed at the child; but may be directed at an adult partner; which makes it imperative for the dentists to master behaviour management along with child psychology.

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CONCLUSION

Child abuse is a merciless act which calls the severest of contempt. Dentists can easily recognize the same and must take a proactive role in helping victims. The present survey revealed an urgent need for providing extensive and effective education for all the budding dentists. In order to achieve this, dental schools, continuing education providers and legal authorities should develop integrated programs for training future dental professionals to diagnose child abuse by exposing them to cases, documenting and reporting.

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