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Original Article

Knowledge, Attitude and Practice (KAP) of Dentists at Military Hospitals Regarding Child Abuse and Neglect: A Cross-Sectional Study

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Abstract

Aim: This study aimed to assess the level of knowledge, attitude and practice of dentists at military hospitals regarding child abuse and neglect.

Subjects and methods: A cross-sectional study with convenient consecutive sample was conducted on army officers and civilian dentists working at Military Hospitals. Data regarding their knowledge, attitude, and practice toward child abuse and neglect were collected using a structured, self-administered questionnaire. Personal questionnaire distribution was preferred than online one. Data was collected through the questions in the questionnaire then were put in tables and excel sheets by the researcher.

Results: 316 questionnaires were distributed; 307 were completely answered, yielding a response rate of 97% for the survey. Statistical analysis showed that 84.7% of the participating dentists had a good level of knowledge regarding physical and social signs of child abuse. Dentists reported a positive attitude towards legal responsibility regarding detecting and reporting cases of abuse with a percentage of 98.4% believed that they had ethical duty to report child abuse cases. Uncertainty about diagnosis was the top reason for not reporting cases of child abuse. 34.5% of respondents were uncertain about the signs and symptoms of abuse, so they were unsure whether they were dealing with an abuse case.

Conclusion: Dentists had a good theoretical understanding of the indicators, risk factors, and manifestations of child abuse and neglect, but they lacked experience of clinical detection and reporting of probable cases.

Keywords: Abuse, Child, Military hospitals , Neglect.

Introduction

Child abuse is a grave violation of a child's fundamental rights and is a significant international public health concern. It does not differentiate between classes and masses and pervades all strata of society.[1] Child abuse is defined by World Health Organization (WHO) as, "Any kind of physical, sexual, emotional abuse, neglect or negligent treatment, 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." [2] The American Academy of Pediatric Dentistry (AAPD) defines dental neglect, as "A willful failure of parent or guardian to seek and follow through with treatment necessary to ensure a level of oral health essential for adequate function and freedom from pain and infection." [3]

In 2016, The United States reported that 676,000 children were reported as victims of child abuse to child protective services. However, because the majority of abuse and neglect remains unreported, it is commonly believed that these figures indicate an underestimation of the prevalence of child abuse.[4] The Global status report on preventing violence against children published by WHO, in June 2020, showed an estimated one billion children – or one out of two children worldwide - suffer some form of violence each year.[5] In Egypt, a study prepared by the National Council for Childhood and Motherhood (NCCM), stated that violence is too readily accepted as a means of raising children into supposedly strong adults.[6]

Dentists have an important role in sounding the alarm about child abuse and neglect through their knowledge regarding any accompanying symptoms appearing on the child that give doubts about the child's exposure to violence. Literature shows that about (50-75%) of child abuse victims present with head, face, and mouth injuries. As most of the characteristic signs can be visualized in the craniofacial and oral regions, identification and reporting of abuse cases to the responsible authorities become not just a moral but legal responsibility as well, for protecting the child from more serious consequences that have a significant impact on his upbringing and future.[7]

A review of literature revealed that few studies were conducted among dentists in Arab countries, and none of these studies investigated dentists' motivation to report suspicion of violence among children.[8] In Saudi Arabia, Sulimany et al.,[9] investigated the knowledge and educational experiences among Saudi dental graduates regarding child abuse and neglect and found that around 60% of the participants had inadequate knowledge regarding child abuse. Likewise, Saeed et al., [10] evaluated the knowledge, attitude, and practice of physicians in Alexandria University teaching hospitals in Egypt using a self-administered questionnaire about the diagnosis and reporting of child maltreatment cases. This research explored that Physicians in Alexandria need clinical training and education sessions to improve their ability to diagnose and report cases of child maltreatment.

Military hospitals are considered one of the most important pillars of the Egyptian health system, dealing with and treating a marked population of children in different dental departments. A few data are available in Egypt about the knowledge, attitude, and practice of dentists regarding child abuse and neglect. There are very limited available data about the dentist's role in reporting child abuse cases to legal authorities. Therefore, this research aimed to evaluate the knowledge, attitude, and practice (KAP) of the dentists working at military hospitals regarding child abuse and neglect.

Subjects and Methods

Study design, and participants

This cross-sectional study was conducted in Cairo, Egypt at five different military hospitals: Al-Maadi, Kobri Al-Koba, Al-Galaa, Ghamra, and Misr Al-Gadida military hospitals, over 6 months period starting from February 2021 up till July 2021. The period taken to get the questionnaire distributed and completed according to the sample size assigned was about four to five weeks in each hospital of those chosen to recruit the sample.

The research protocol was approved by the Dental Research Ethics Committee, Faculty of Dentistry, Cairo University before the beginning of the study. The target participants were dentists working at military hospitals whether officer dentists or civil dentists. Both genders and all specialties were included. The exclusion criteria were dentists refused to participate in the study. Three hundred and sixteen questionnaires were distributed, after distribution of the questionnaires 307 were completed and subjected to statistical analysis while nine questionnaires were excluded due to incomplete data.

Sample size calculation

Convenient consecutive sampling was applied; the expected number to be included in the study was about 319 dentists working at that five representing military hospitals. Three dentists refused to participate in the study. From the three hundred and sixteen questionnaires which were distributed, nine questionnaires were excluded due to incomplete data so the final sample was 307 questionnaires.

The questionnaire

Data were collected from participants using a structured, self-administered questionnaire written in English [Table 1]. The questionnaire was re-constructed from the original questionnaire taken from previous studies [11 ,12] to match the subject of concern. It was composed of four sections. The first section included 6 questions that were planned to survey the baseline characteristics and demographics of the participants. The second section consisted of 16 binaries (True/False) questions designed to measure the degree of knowledge of the participating dentists regarding diagnostic indicators of the problem of child abuse. The third section included four close-ended questions (multiple choice) cared about testing dentists' attitudes toward child abuse and neglect. The fourth section of the questionnaire was designed to address the respondents' reporting behaviours and the actions that they would have taken if a suspected case of child abuse was recognized.

Questionnaires were distributed by one researcher to the dentists during their existence in their clinics either in the morning before they start their work or at the end of the day after they had finished their clinical work, and 15 minutes were given to them to answer all the questions. To ensure the accuracy of results, participants answered the questionnaire independently; where they were not allowed to discuss items between them. Throughout the whole study, only one researcher dealt with participants' questions either to clarify any part of the questionnaire or explain anything about the survey; however, the researcher was not allowed to help the participants in answering the questions. After the participants finished answering the whole questionnaires, they were collected by the researcher. All participants responded appropriately to the study questionnaire. Only nine questionnaires were excluded due to missing data. So, the response rate was 97%.

Bias

Selection bias was avoided as all dentists from the five hospitals at the time of recruitment were included. One well-trained researcher provided the same explanations with a standardized method for all the participants to avoid performance bias. Finally, all collected data had been accurately recorded and reported to avoid detection and reporting bias.

Statistical analysis

Categorical data were presented as frequencies (n) and percentages (%).

Numerical data were presented as mean and standard deviation values. Associations with numerical variables were analyzed using the

Kruskal Wallis test followed by Dunn's post hoc test with Bonferroni correction.

Table (1): Questionnaire.

Section (A): Sociodemographic data		
I	Age (years)	21-25 years
		26-35 years
		36-45 years
		46-55 years
		≥56 years
II	Gender	Male
		Female
III	Level of dental training	Bachelor's degree
		Higher degree
IV	Educational institution	Government
		Private
V	Experience years	< 5 years
		5-10 years
		> 10 years
VI	Number of pediatric patients seen every week	< 5
		> 5
Section (B): Knowledge of participants about physical and social signs of child abuse		
Q1	Bruises on the cheek may indicate slapping or grabbing of the face.	True
		False
Q2	Repeated injury to the dentition resulting in avulsed teeth or discolored teeth may indicate repeated trauma from abuse.	True
		False
Q3	Bruises noted around the neck are usually associated with accidental trauma	True
		False
Q4	Child abuse is primarily associated with the stresses of poverty and rarely occur amongst middle or high-income earners.	True
		False
Q5	Children who have been abused usually tell someone soon after the abuse.	True
		False
Q6	If a child readily states that an adult has caused harm, the accusation should be addressed.	True
		False
Q7	Child abuse may be indicated if a parent describes a child's injury as a self-inflicted injury.	True
		False
Q8	Child abuse may be indicated if a parent reports a child's injury as a sibling-inflicted injury.	True
		False
Q9	Child abuse may be indicated if a parent delays seeking medical attention for a child's injury.	True
		False
Q10	General dentists can detect child abuse during their clinical practice.	True
		False
Q11	Dentists are aware of medico-legal responsibility toward suspected cases of child abuse.	True
		False
Q12	Additional bruises usually occur in areas overlying bony prominences in abuse victims.	True
		False
Q13	The abuser in most cases is someone the child knows well.	True
		False

Q14	The best way to deal with suspected cases of child abuse is to confront the parents and accuse them directly of the abuse.	True
		False
Q15	Emotional and psychological signs of abuse may include fear of going home or of the parents.	True
		False
Q16	A history that is vague and differs every time the parent tells it is a possible indicator of abuse.	True
		False
Section (C): The attitudes of the participants regarding child abuse		
Q17	Health workers should be trained with respect to child abuse.	Agree
		Disagree
		No idea
Q18	Dentists should be legally responsible to report child abuse.	Agree
		Disagree
		No idea
Q19	Dentists have an ethical duty to report child abuse.	Agree
		Disagree
		No idea
Q20	Professionals failing to make a report when child abuse is suspected may allow that child to be continuously injured.	Agree
		Disagree
		No idea
Section (D): Barriers to reporting suspected cases of child abuse and places of reporting perceived by the respondents		
Q21	What barriers preclude you from reporting child abuse cases?	Uncertainty about your diagnosis.
		Fear of violence in that family toward the child.
		Lack of knowledge regarding referral procedures.
		Not wanting to interfere.
		Negative impact on your practice
Q22	Where do you have to report child abuse and neglect in Egypt?	National Council for Motherhood and Childhood.
		Child Helpline 16000.
		Local police.
		The nearest hospital.
		I don't know.
Q23	Where did you get your source of information on child abuse, if you have received any?	Dental school.
		Dental journals and literature.
		Continuing education courses.
		National dental meetings.

Associations with categorical variables were analyzed using chi-square test followed by pairwise comparisons utilizing multiple z-tests with Bonferroni correction. The significance level was set at $p \leq 0.05$ for all tests.

Results

Section A

Three hundred and seven respondents took part in the study, 156 (50.8%) of which were males and 151 (49.2%) were females. The majority of the respondents, were 26-35 years old 142(46.3%), BDS holders 214(69.7%), working in government jobs 136(44.3%), having less than 5 years of experience 176(57.3%) and seeing less than 5 pediatric patients every week 194(63.2%) [Figure 1].

Section B

The mean knowledge score of our samples was 13.08 ± 1.78, with the majority of the participants (84.7%) having a good level of knowledge regarding physical and social signs of child abuse. Almost all the participants (95.4%) thought that bruises on the cheek may indicate slapping or grabbing of the face. More than half (54.7%) thought that bruises noted around the neck are usually associated with accidental trauma. The majority of the participants (70%) agreed that there is no correlation between the stress of poverty and child maltreatment. Only (19.2%) thought that victims of abuse tend to inform someone about the experience they faced soon after its occurrence, and almost all the participants (97.1%) thought that the accusation should be addressed.

Additionally, the majority of the participants (77.2%) believed that a guardian reporting a child's injuries as self-mutilation-based injuries is an indicator of child abuse. More than 90% agreed that there is an association between child abuse and procrastination in seeking medical care for children's injuries. Around 72.3% of participants believed that dentists are not aware of medico-legal responsibility toward cases of child abuse. Less than 40% of the participants agreed with the statement that additional bruises usually occur in areas overlying bony prominences in abuse victims**.** Only 9.4% of the participants agreed that confronting the parents and accusing them directly is the most suitable approach for handling cases of child abuse.

Section C

Two hundred and ninety-two dentists (95.1%) agreed that all health workers should be trained well to detect child abuse. (82.4%) of dentists agreed that there is a legal responsibility to report child abuse cases. Almost all the participating dentists (98.4%) agreed that there is an ethical duty for dentists to report child abuse. Only 21.8% of participants didn't think that professionals failing to make a report when child abuse is suspected may allow that child to be continuously injured.

Section D

The majority of respondents chose "Uncertainty about your diagnosis" for question (1) 106 (34.5%), "I don't know" for question (2) 111 (36.2%), and "Dental school" for question (3) 174 (56.7%) [Figure 2].

There was a significant difference between different age groups ($p=0.002$). The highest score was found in the (36-45 y) age group, followed by, (46-55 y), then the (26-35 y), while the lowest score was found in the (21-25 y) age group. The association between knowledge and age were presented in figure (3). Post hoc pairwise comparisons showed the (36-45 y) age group to have a significantly higher score than the (21-25 y) and (26-35 y) age groups ($p<0.001$).

There was a significant difference between different years of experience ($p<0.001$). The highest score was found in (> 10 years) of experience, followed by, (5-10 years), while the lowest score was found in (<5 years) of experience. Post hoc pairwise comparisons showed respondents with (>10 years) of experience to have a significantly higher score than respondents with (<5 years) of experience ($p<0.001$) [Figure 4].

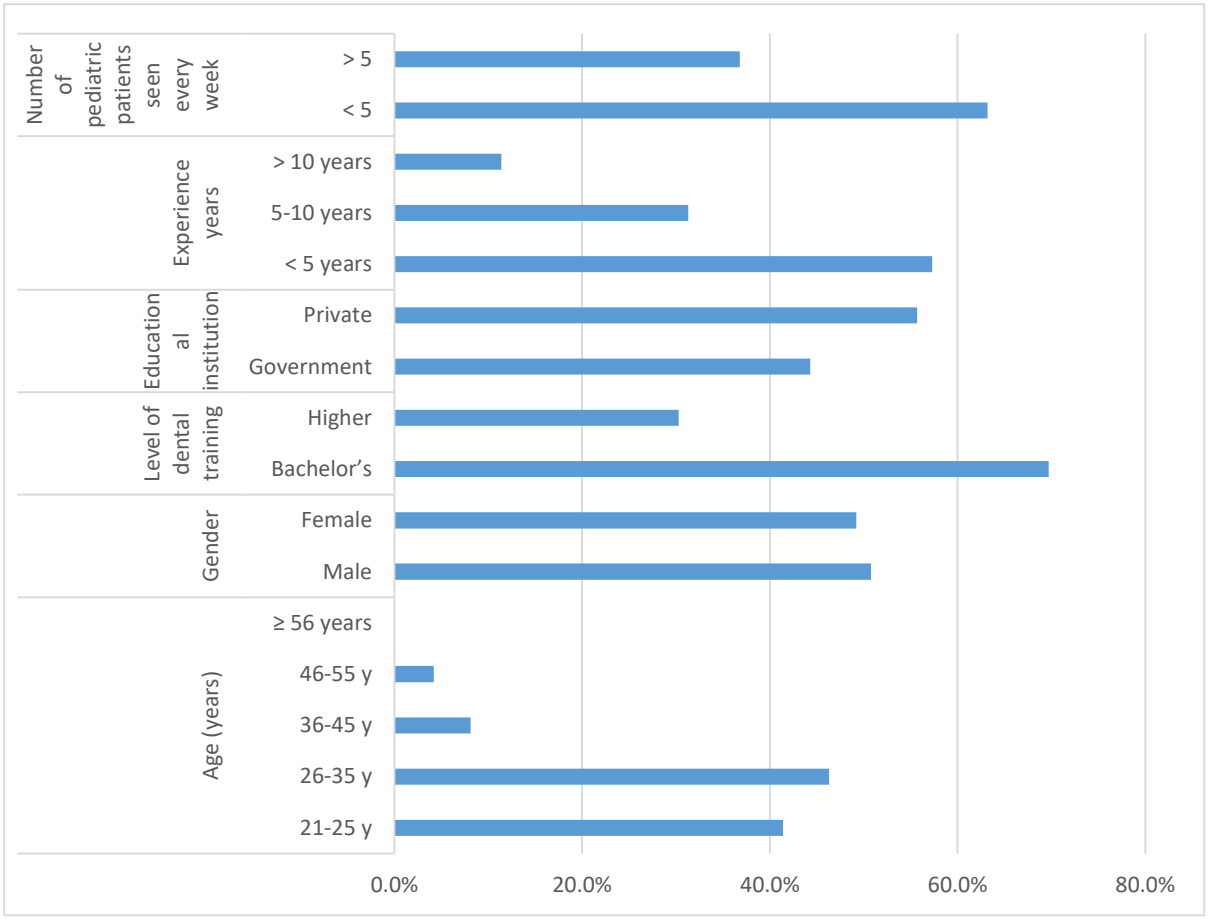

Figure (1): Bar chart showing the percentage of socio-demographic data

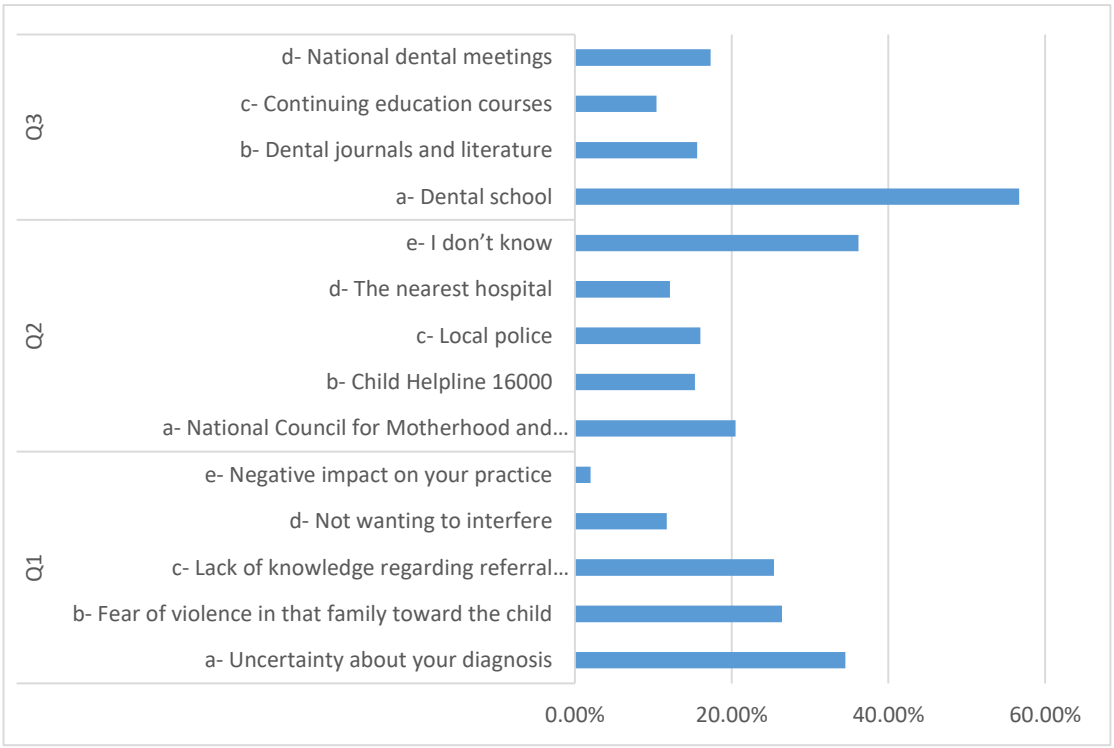

Figure (2): Bar chart showing the percentage of answers to barriers questions

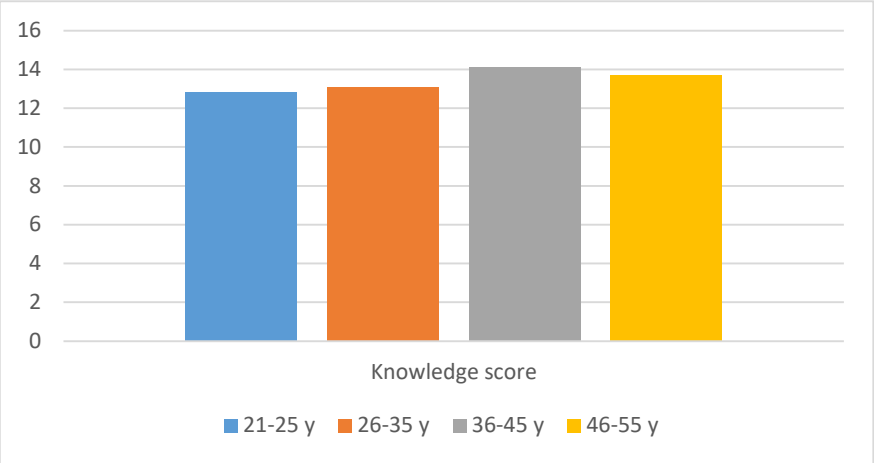

Figure (3): Bar chart showing association between knowledge and age

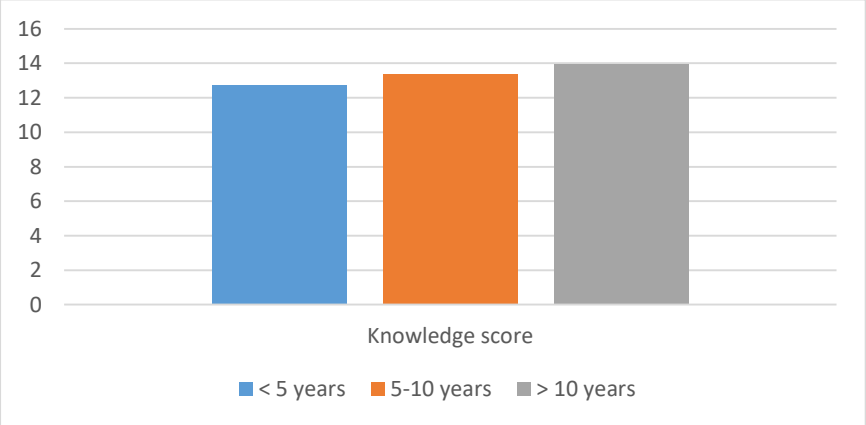

Figure (4): Bar chart showing the association between knowledge and years of experience

Discussion

Every child in the world has the right to develop in a caring environment, and every member of society has a responsibility to safeguard children. However, millions of children are victims of abuse around the world. The majority of lesions documented as a result of child maltreatment affect the craniofacial regions, as previously mentioned. Therefore, dentists are in an excellent position to detect child abuse.[13] Abusers frequently assault the head and face area; this could be due to the easy access to these regions and the psychological significance associated with them, which could explain the large frequency of injuries reported in these body parts.[14]

A meta-analytical review published by Cunitz et al.,[15] in 2019 attempted to comprehensively analyze the relationship between at least one parent's military deployment and the influence on children's mental health, revealed that parental military deployment had a negative impact on children's mental health. The health care system must address the elevated risk to children whose parents serve in the army. The present study was carried out among dentists working at military hospitals whether officer dentists or civil dentists. The five hospitals that were chosen represented the vast majority of

the armed forces hospitals because they receive many civil and military cases, especially cases of children. These hospitals were easily reachable by the researcher himself.

This questionnaire-based cross-sectional study aimed mainly to evaluate the knowledge, attitude, and practice of dentists at military hospitals regarding child abuse and neglect due to the lack of similar studies. It also aimed to highlight the reason for not reporting suspected cases of abuse between dentists and possible places to report these cases by them. Self-administered questionnaires are the best applicable method to investigate dentists' knowledge, attitudes, and experience toward child abuse and neglect.[16]

Three hundred and seven (307) completed and returned the questionnaires which were statistically analyzed with a response rate of (97%). Our response rate was higher than Sonbol et al.,[17] and Olatosi et al.,[18] where the response rates were 256 of 400 (64%) and 179 of 235 (76%) respectively. This might be attributed to the time taken by the researchers to distribute and collect the questionnaires. Only one day has been set to recruit the sample either during the Jordanian Dental Association Council election meeting or respondents invited to participate in the study who were attending the update course in Nigeria.

Regarding the knowledge questionnaire, when it came to dentists' awareness of societal markers of abuse, a large percentage of the participants chose the correct answer for each sentence. The majority of participants reported a good understanding of the distinction between intentional abuse injury and accidental injury. Identifying the social indicators of child abuse, as well as the clinical manifestations of physical abuse, may aid in the detection of incidents of abuse.[19] An important point of debate is the association between the stress of poverty and child maltreatment. Two hundred and fifteen (215) dentists in our study (70%) agreed that there was no relationship, thus it could be found among middle or high-income earners. Earlier researchers have found a link between poverty and the incidence of child abuse and neglect.[20] These variations emphasize the critical need for evidence on the association between family socioeconomic status and child abuse or neglect.

Only (38.8%) of participating dentists agreed that additional bruises usually occur in areas overlying bony prominences in abuse victims. On the contrary, it wasn't in accordance with R. Hashim & Al-Ani[21] who found (79.2%) of dental students in the study indicated that physical abuse occurs in areas overlying bony prominences. The most frequent sites of bruising in children who have not been abused are the knees and shins, as well as bony prominences such as the forehead. The most frequently bruised parts of abused children's bodies are their heads and faces.[22]

Regarding the assessment of the attitude of dentists toward child abuse and neglect, almost all respondents (98.4%) believed that they had an ethical duty to report child abuse cases; however, they had different ideas about how to handle these situations. Hazar Bodrumlu et al.,[11] found that the majority of the dental students were aware of their ethical responsibility toward protecting children from child abuse. Many researchers have looked into the reasons behind dentists' failure to report child abuse. In this study, uncertainty about the diagnosis was the top reason for not reporting cases of child abuse. One hundred and six (34.5%) of respondents were uncertain about the signs and symptoms of abuse, so they were unsure whether they were dealing with an abuse case. Beltagy[23] in his study found that (67%) of the participants were not able to report cases for the same reason.

A very important question at the end of the questionnaire concerned with the proper destination to report child abuse and neglect in Egypt. According to the results of the current study, more than a third of the participants

(36.2%) had no idea where to report suspected incidents of child abuse. This indicates that the majority of dentists are unaware of the proper reporting agency and that there is a miscommunication between social welfare organizations and healthcare workers. This finding was in line with Hashim & Al-Dallal[12]. Ignorance of the relevant laws may have a role in the reduced reporting rate among dentists in general.[24] More than half of the dentists (56.7%) said they learned about child abuse during studying in dental school. It is important to remember, however, that this issue is mostly presented theoretically in the classroom, as opposed to in the clinical context. Now might be a good time in Egypt to make a concerted effort to bring this material to the forefront of dentistry curricula and clinical settings.[23]

In the present study, there is a significant difference between knowledge about physical and social signs of child abuse and different age groups with higher knowledge scores between older age groups. Our findings are in conformity with the results of research done by Mogaddam et al.[19] who found that the only significant characteristics that affected suspicions of abuse cases were older age and formal training in child abuse. In contrast, a study conducted by Jahanimoghadam et al.,[25] revealed that there was no statistically significant relationship between age and the mean of knowledge, attitude, and practice scores. Also, there was a significant difference between knowledge and years of experience. Dentists with more than ten years of experience achieved high scores while in the same study, dentists with fewer experience years had low scores. This may be attributed to the number of patients seen by the dentist with different parental behaviors which are directly proportional to the experience of practicing over years. Dalledone et al.,[26] found a significant correlation between suspicion of child abuse and years of experience in the profession. Contrary to this result, Sonbol et al.,[17] discovered that dentists who had been in practice for less than five years had significantly higher scores than those who had been in practice for more than five years. The author explained that by the fact that child abuse education has just lately been incorporated into faculties' curricula.

Regarding the attitude of participants toward child abuse, there was a significant difference between both genders, with a significantly higher percentage of females showing better attitudes than males. This could be ascribed to women's caring attitude when it comes to children and their safety. Similarly, Manea et al.,[27] discovered that females were more likely than males to properly answer questions on child abuse and neglect in a study aiming at assessing the knowledge of and attitude toward child abuse and neglect among Italian dentists.

The main limitation of our study is related to that not all the participating dentists are dealing with pediatric patients because they are of all specialties. The study was not confined typically to assess the level of knowledge, attitude, and practice of pediatric dentists regarding child abuse and neglect. Despite this limitation, to the best of our knowledge, this study is the first study to assess the knowledge, attitude, and practice regarding child abuse among dentists working at military hospitals in Egypt. Our findings can be the foundation for establishing future interventions over a larger scale at military hospitals or even Egyptian healthcare institutions could be included. Egyptian’s child protection laws should be introduced to dentists to highlight the importance of this crucial issue and provide step-by-step standardized procedures for reporting suspected cases of child abuse. Moreover, our results can be used as baseline data for evaluating the effectiveness of any possible future interventions that are aimed at improving dentists’ ability to report suspected cases of child abuse and neglect.

Conclusions

Child abuse is a global issue, and increasing public awareness is the first step toward

reducing it. The current study highlights that dentists have sufficient information to identify and diagnose child abuse and that even if they can diagnose, they are unaware of the appropriate agency to report the matter. However, the findings provide useful information on a critical topic and significantly added to our understanding of dentists' knowledge and experiences regarding child abuse and neglect. As a result, additional efforts should be made to contribute to the global effort to improve dentists' knowledge, attitude, and practice concerning this societal problem.

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Conflict of Interest:

The authors declare no conflict of interest.

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Ethics:

This study protocol was approved by the ethical committee of the faculty of dentistry-Cairo University.

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