

Knowledge and Attitudes toward Child Abuse and Neglect (CAN) among Dental and Medical Practitioners in Saudi Arabia

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ABSTRACT

Introduction: Child abuse and neglect (CAN) is a serious and an increasing global problem. Aim: Our study aims to assess the knowledge and attitudes toward child abuse and neglect (CAN) among dental and medical practitioners in Saudi Arabia.

Methods: This cross-sectional study was conducted among 371 participants recruited from medical and dental students, interns, and practitioners in Saudi Arabia. The data were collected using an online self-administrated questionnaire to measure the CAN level of knowledge, social indicators, attitudes, and barriers. Descriptive statistics included the mean, standard deviation, count, and percentage. Chi-square and t-tests were used for the data analysis.

Results: The mean total score of knowledge was 7.51 ± 1.68 points. A range of 93.8% to 56.6% of the participants recognized the social indicators of CAN. Females (7.86 ± 1.29) and health practitioners in the governmental sector (7.65 ± 1.68) reported a higher level of CAN knowledge than males (7.044 ± 2 , $P=0.001$) and those in the private sector (7.20 ± 1.62 , $P=0.015$). A total of 41.51% had previous CAN training, but only 10.24% had experience reporting a CAN incident. A total of 65.2% believed that further training was needed to deal with CAN. The majority (72.5%) believed that uncertainty was the prime cause of not reporting CAN.

Conclusion: Most participants demonstrated a high level of knowledge regarding the clinical presentation of CAN. Also, the majority of the participants recognized the social indicators for CAN and believed that they needed further CAN training. It is recommended that health educational entities and hospitals provide additional CAN sessions and training.

Key words: Child abuse and neglect, Child maltreatment, Dental practitioners, Medical practitioners, Attitudes

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INTRODUCTION

Child abuse and neglect (CAN), or "child maltreatment," is a serious and an increasing global problem [1]. CAN's consequences and effects are tremendous and might cause disordered psychological development and serious behavioural problems in children [2]. According to the World Health Organization (WHO), child maltreatment,

which includes "all types of physical and/or emotional ill-treatment, sexual abuse, neglect, negligence, and commercial or other exploitation," results in harm, whether actual or potential, to the child's well-being [3]. The four known types of CAN are: (a) physical abuse, which is the intentional use of physical force that could result in harm to the child [4]; (b) sexual abuse, which includes any use of the child for the purpose of sexual gratification of an adult [5]; (c) emotional abuse, which includes forms of continuous behaviours of rejection, threatening, or demeaning of the child by a caregiver [6];

and (d) neglect, which is when the child's caregiver fails to provide basic needs, such as food, shelter, and medical attention, which can ultimately cause harm to the child's health or development [4]. In Saudi Arabia, the incidence and prevalence of psychological and physical abuse were found to be higher than other forms of CAN [7,8].

Over the past few decades, CAN has received more attention from scientific and healthcare scholars globally [9]. The responsibility of healthcare providers, including medical and dental practitioners, is undeniably crucial to identifying child maltreatment cases. For example, dentists could be the first to encounter physical abuse commonly manifested in the head, neck, and mouth, since these areas are routinely examined by such healthcare providers [10,11].

According to the Child Abuse Recognition Experience Study (CARES), primary care clinicians do not always report suspected child abuse cases to protective services [12]. In fact, there are several barriers that prevent healthcare practitioners from reporting such cases. For instance, the ambiguity that a child has been abused is one of the main difficulties, along with having past negative experiences due to reporting [13-15]. As a result, these barriers have made healthcare providers reluctant to take appropriate measures for children in need [13-15]. Healthcare providers have been assessed for their knowledge and attitudes regarding the diagnosis and reporting of CAN cases in various studies all over the world.

According to studies conducted in Saudi Arabia, knowledge of child's physical abuse signs and symptoms among dentists has been revealed to be insufficient [16,17]. For example, a study conducted in Jeddah city found that about half of the dentists were unable to identify the correct signs of CAN [16]. Moreover, 52.2% of the dentists in a similar study reported not being confident in recognizing them [17]. Another study that investigated nurses in Jeddah city found that 40.7% of participants scored 75% or higher for knowledge of CAN signs [13]. However, a study conducted in Abha city found that 96.3-97.3% of primary healthcare physicians recorded a good awareness level regarding types of CAN [18]. In another study in Riyadh city, dental students were proven to have lower knowledge about CAN compared to medical students [19].

It is believed that CAN cases are underreported in Saudi Arabia [18]. The most common barriers to reporting CAN cases in previously mentioned studies were fear of consequences (68.5-82.4%) [19], insufficient knowledge of measures taken in referral procedures (60%) [16], fear of family violence toward the child (88%) [17], and lack of certainty about the diagnosis of CAN (80%) [17]. All of these studies addressed and recommended the need for further training of all healthcare providers and the necessity of improving the topic coverage in their school curricula or undergraduate studies, as this is the main source of healthcare providers' knowledge [13,16-19].

Finally, further research on the knowledge and attitude of Saudi healthcare providers towards CAN is required to

attain an extended and more representative data sample for validating generalizability. Accordingly, the aim of our study is to assess the knowledge and attitudes toward child abuse and neglect (CAN) among dental and medical practitioners in Saudi Arabia.

METHODS

This cross-sectional study explored the level of knowledge and attitudes toward child abuse and neglect among dental and medical practitioners in Saudi Arabia. The inclusion criteria for participants in this study were medical and dental undergraduate students, interns, and all practitioners working in private and governmental clinics. Furthermore, participants who did not sign the study consent form or did not meet the participant criteria were excluded from the study.

The study survey was based on a previously published validated survey with modifications [19]. The survey was self-reported and administered in an online format created using Google Forms in English. Social media platforms, such as Twitter, Instagram, and official study groups on Telegram and WhatsApp's, were chosen to deliver the survey to all participants. The study's objectives and goals were presented at the beginning of the survey. The responses were anonymized, and all participants signed a consent form prior to filling out the survey. Answering the survey took three to five minutes. Participation was highly encouraged; however, it remained voluntary. This study was approved by Umm Al-Qura University, with institutional review board number (HAPO-02-K-012-2021-08-725).

The survey is composed of five main sections. Section one is about demographic data, including gender, age, region, nationality, specialty, current studying status, workplace, and studying place. This is followed by two questions about previous training and reporting for CAN cases, with a range of answers (Yes/No). Section two measures social indicators and risk factors of CAN via nine questions with a range of answers (Yes/No). Section three measures clinical presentations of CAN via nine questions with a range of answers (Yes/No). Each question in Section three will have one correct answer, interpreted according to a previous study [16]. The sum of the correct answers gives a total knowledge score that ranges between 0 and 9, where the latter indicates the highest level of knowledge. Section four measures the opinions and attitudes of medical and dental participants toward CAN via seven questions with three Likert-type scales (agree, neutral, disagree). Finally, Section five consists of questions assessing the barriers to reporting CAN cases with a range of answers (Yes/No).

Statistical analysis was conducted using Statistical Package for the Social Science (SPSS) version 25 (IBM, Inc., Armonk, NY, USA) and Excel software. Descriptive statistics, such as the mean, standard deviation, count, and percentage, were used to summarize the data. Chi-square, t-test, ANOVA, and linear regression were used for the data analysis. A P-value of 0.05 was used as the statistical significance level.

RESULTS

A total of 371 participants completed the study questionnaire. The mean age of the participants was 26.43 years, with a standard deviation (SD) of 3.82 years, and the mean years of practice was 1.37, with an SD of 2.85 years. The participants' demographic data are shown in Table 1.

Regarding training for CAN, 41.5% of the participants received previous training; 92.2% of them were in the dentistry specialty, which made a significantly higher difference compared to those in the medical specialty when we used the Chi-square test (P-value 0.001). Furthermore, only 10.2% of the participants had previously reported a CAN case.

Table 1: Demographic data.

Variable	N	%
Gender	Male	42.32
	Female	57.68
Specialty	Medicine	15.63
	Dentistry	84.37
Are you	Student	9.97
	Intern	42.59
	General practitioner/resident	45.55
	Specialist/consultant	1.89
Current workplace (primary)	Student/intern	50.67
	Governmental	29.38
	Private	19.95
Where do/did you study/studied medicine/dentistry?	Governmental college	69.27
	Private college	30.73
Region in Saudi Arabia	Western	56.06
	Central	22.37
	Southern	8.09
	Eastern	7.28
	Northern	6.2
Nationality	Saudi	85.18
	Non-Saudi	14.82
Did you receive any training for child abuse and neglect (CAN)?	Yes	41.51
	No	58.49
Have you previously reported child abuse and neglect (CAN)?	Yes	10.24
	No	89.76

The participants were asked about social indicators and risk factors of CAN (Table 2). The risk factor "Parents are substance abusers/alcoholics" was the highest recorded

(93.8%). However, 43.4% did not think that child disability or having chronic diseases was a risk factor for CAN.

Table 2: Knowledge about social indicators and risk factors of CAN.

Variable	N	%
Increased family size	Yes	61.2
	No	38.8
Parents' education	Yes	82.2

	No	66	17.8
Low socioeconomic status	Yes	292	78.7
	No	79	21.3
Unemployed parents	Yes	280	75.5
	No	91	24.5
Marital and family problems	Yes	346	93.3
	No	25	6.7
One or both parents suffering from mental illness	Yes	324	87.3
	No	47	12.7
Parents are substance abusers/alcoholics	Yes	348	93.8
	No	23	6.2
Child is disabled/has chronic disease (s).	Yes	210	56.6
	No	161	43.4
Child is an orphan/adopted.	Yes	261	70.4
	No	110	29.6

Participants answered several questions about their knowledge of the clinical presentation of CAN (Table 3). The most recorded correct answer was that multiple bruises in different healing stages were a clinical presentation of CAN (91.9%).

The mean total knowledge score was 7.51 (with a maximum possible score of 9), with an SD of 1.68 points. Using a t-test, there was no significant difference in

knowledge scores between different specialties or nationalities. However, females (m=7.86, SD=1.29) scored significantly higher knowledge levels compared to males (m=7.044, SD=2, P-value 0.001). Also, healthcare practitioners who studied or are studying in governmental colleges (m=7.65, SD=1.68) scored higher knowledge levels compared to those in private colleges (m=7.20, SD=1.62, P-value=0.015).

Table 3: Knowledge about clinical presentation of CAN.

Variable		N	%
Changing the child's history of illness	Yes*	297	80.1
	No	74	19.9
Signs of unaccountable fear of a specific place or person	Yes*	330	88.9
	No	41	11.1
Delayed social and intellectual development	Yes*	279	75.2
	No	92	24.8
Poor general hygiene	Yes*	312	84.1
	No	59	15.9
Multiple bruises in different healing stages	Yes*	341	91.9
	No	30	8.1
Bruises over bony prominences	Yes	271	73
	No*	100	27
Burn marks on palms	Yes*	312	84.1
	No	59	15.9
Burn marks with sharply delineated margins	Yes*	333	89.8
	No	38	10.2
Repeated injury to the dentition, resulting in avulsion or discoloration	Yes*	314	84.6
	No	57	15.4
*Correct answers			

As displayed in Table 4, when asked about their opinions about CAN, 67.4% agreed that there are governmental agencies to protect children from CAN. However, 65.2%

believed that they needed further training to deal with CAN. Other attitude items are shown in Table 4.

Table 4: Attitudes toward CAN.

Variable		N	%
Abused children will usually tell someone immediately.	Disagree	235	63.3
	Neutral	87	23.5
	Agree	49	13.2
In most cases of CAN, the perpetrators are parents.	Disagree	45	12.1
	Neutral	168	45.3
	Agree	158	42.6
The best way to deal with CAN is to accuse the parents directly.	Disagree	179	48.2
	Neutral	108	29.1
	Agree	84	22.6
There are governmental agencies to protect children from CAN.	Disagree	33	8.9
	Neutral	88	23.7
	Agree	250	67.4
You have the ability to differentiate CAN from accidental injuries.	Disagree	42	11.3
	Neutral	148	39.9
	Agree	181	48.8
Medical and dental schools provide good background about CAN.	Disagree	81	21.8
	Neutral	144	38.8
	Agree	146	39.4
We need further training to deal with CAN.	Disagree	38	10.2
	Neutral	91	24.5
	Agree	242	65.2

Table 5 exhibits barriers to reporting CAN. The majority of participants believe that uncertainty was the prime cause for not reporting CAN (72.5%), followed by a lack

of formal guidelines to report CAN (57.5%). A small percentage (38.8%) considered fear of the family to be a barrier to reporting CAN.

Table 5: Barriers to reporting CAN.

Variable		N	%
Uncertainty	Yes	269	72.5
	No	102	27.5
Fear of family	Yes	144	38.8
	No	227	61.2
Fear of consequences	Yes	204	55
	No	167	45
Lack of knowledge	Yes	198	53.4
	No	173	46.6
Lack of confidence	Yes	179	48.2
	No	192	51.8
There are no formal guidelines to report CAN.	Yes	213	57.4
	No	158	42.6

DISCUSSION

This study aimed to explore the level of knowledge and attitudes toward child abuse and neglect among dental and medical practitioners in Saudi Arabia. Most participants had high levels of knowledge regarding the clinical presentation of CAN. Also, the majority of the participants recognized the social indicators for CAN. Females and health practitioners in the governmental sector demonstrated higher levels of CAN knowledge than males and those in the private sector, but there was no significant difference in knowledge scores among dental and medical specialties. Around one-third of the participants had previous training for CAN, but only a limited number had previously reported CAN. However, more than half of the participants believed that further training was needed to deal with CAN. The majority of participants believed that uncertainty was the most common cause for not reporting CAN, followed by a lack of formal guidelines for reporting CAN. In this study, 41.5% of the participants had received previous training for

CAN. This was slightly lower than in a previous Saudi study, which reported that 61.3% of dental and 53.9% of medical participants had previous training for CAN [19]. Our results are also slightly lower than an Indian study that found that 49% of dental and medical residents had formal training in identifying child abuse [20]. This discrepancy might be due to cross-cultural differences and the fact that our study was conducted all over Saudi Arabia, which includes many medical and dental faculties that teach different curricula.

For reporting suspected cases of CAN and social indicators, 93.8% of participants agreed that substance abusers/alcoholics were the likeliest to abuse or neglect their children. This observation aligns with another Saudi study that showed agreement among 91.9% to 100% of the participants regarding this risk factor [19].

In our study, marital and family problems were the second highest social indicator, as 93.3% of participants believed that marital and family problems put the child at high risk for abuse and neglect.

Similar observations were reported in studies conducted in Saudi Arabia (93%) [19] and Malaysia (93.6%) [21].

Upon assessment of knowledge of the clinical presentation of CAN, the most identifiable sign was the presence of multiple bruises in different healing stages, followed by the presence of burn marks with sharply delineated margins (with a participant agreement of 91.9% and 89.8%, respectively).

These results are comparable to [16], who reported a participant agreement of 94% and 84% for multiple bruises and burn marks, respectively. Moreover, the majority of the participants (73%) considered bruises over bony prominences a sign of CAN, which is incorrect because

these areas are commonly injured during regular activities of children [22]. These results are higher than what was reported in Jordan (54%) [23], India (58.5%) [20], and Malaysia (44.4%) [21], in terms of participants who considered bruises over bony prominences as a CAN sign. These differences might be due to the higher academic level of the population selected by these studies [20,21,23], while our study chose a larger population with participants ranging from undergraduate students to specialists.

There was no significant difference in the mean knowledge scores between dental and medical specialties in our study, which is consistent with [20] conducted in India, but contradicted the previous study in Saudi Arabia [19], where the mean score of knowledge among medical students and interns were found to be higher than dental students and interns [19]. This difference may be due to the fact that our study was conducted all over Saudi Arabia, while the previous study was conducted only in Riyadh, Saudi Arabia [19].

In the present study, there was a statistically significant difference in the knowledge levels between healthcare practitioners who studied or are studying in governmental colleges and those in private colleges, with the former demonstrating higher knowledge levels. This could indicate the need to improve the educational programs regarding CAN in private colleges.

When it comes to participants' opinions about CAN, 63.3% of participants showed their disagreement that abused children will usually tell someone immediately. Similarly, 69.23% of the participants disagreed with that statement in India [20].

The results of this study revealed that only 11.3% showed their inability to differentiate CAN from accidental injuries, which, in fact, may indicate a good level of knowledge. However, a slightly higher percentage (22.1%) disagreed about being confident in recognizing signs of child abuse in [17], possibly because the sample in this study included only dentists.

A significantly higher number of participants (36.2%) who are in the medical field disagreed with the statement "Medical and dental schools provide good background about CAN" compared to those in the dentistry field (19.2%).

These results are similar to [19] findings, in which a higher number of medical students and interns (33%) disagreed with a similar statement compared to participants from the dental field (19.7%) [19]. This could suggest a lack of adequate training in the medical undergraduate curricula compared to dental curricula or indicate that medical students pay more attention to CAN and consider it an important subject that needs more emphasis in their curricula.

Our study showed that the main barrier to reporting CAN cases among healthcare providers is uncertainty

(72.5%), and this finding is similar to previous studies in Jordan (73%) [24] and Denmark (about 80%) [25]. A significantly higher number of healthcare practitioners who studied or are studying in private colleges (64%) recorded a "Yes" to "Lack of knowledge" barrier than those in governmental colleges (48.6%). Similarly, a significantly higher number of medical healthcare practitioners (69%) also recorded "Yes" to the same barrier compared to dental practitioners (50.5%).

The present study focuses on participants from the dental and medical fields at different undergraduate and postgraduate levels, since they are in a crucial position to detect and diagnose child abuse and neglect, thus justifying the importance of such a study. The sample was taken from all regions of Saudi Arabia, which makes the data more representative compared to previous local studies. However, this study encountered certain challenges, including an unequal sample size of dental and medical participants and the use of a convenience sampling method. Future national surveys might be more informative about such an important topic. It is recommended that health educational entities include CAN as an essential part of the educational curricula, especially for private colleges, and that advanced courses on CAN be given to graduated health practitioners.

CONCLUSION

Most participants had high levels of knowledge regarding the clinical presentation of CAN. Also, the majority of the participants recognized the social indicators for CAN. Females and health practitioners in the governmental sector reported higher levels of CAN knowledge than males and those in the private sector. However, there was no significant difference in the knowledge scores among the dental and medical specialties. Some participants had previous training for CAN, but only a limited number had previously reported a CAN incident. Many of the participants believed that further training was required to deal with CAN. The majority of participants believed that uncertainty was the prime cause of not reporting CAN, followed by a lack of formal guidelines for reporting CAN. Based on the study results, health educational institutions, especially private colleges, should include CAN as an essential part of the curricula, and advanced training should be provided for graduated health practitioners.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

LIST OF ABBREVIATIONS

- Child abuse and neglect (CAN).
- Child Abuse Recognition Experience Study (CARES).

- Statistical Package for the Social Science (SPSS).
- Standard deviation (SD).

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