

Dental health care providers' views on child physical abuse in Malaysia

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Abstract

Aims To assess the knowledge, attitudes and experience of a group of Malaysian dental health care providers regarding child physical abuse (CPA) cases in terms of frequency of occurrence, diagnosis, risk factors and reporting.

Methods A questionnaire was distributed to all dental health care providers attending a national paediatric dentistry conference in Kuantan, Malaysia, and demographical variables, knowledge, attitudes and experience about CPA, risk factors and the reasons for not reporting abuse cases were collected. Descriptive statistics and bivariate

analysis were performed. A 5 % level of statistical significance was applied for the analyses ($p \leq 0.05$).

Results The response rate was 74.7 %. Half of the respondents (52.8 %) stated that the frequency of occurrence of CPA is common in Malaysia. Full agreement between dental health care providers was not determined concerning the identification of signs of CPA and its risk factors. Although 83.3 % were aware that reporting CPA is a legal requirement in Malaysia, only 14.8 % have reported such cases. Lack of adequate history was the main reason for not reporting. Virtually two-thirds of the respondents (62 %) indicated that they had not received sufficient information about CPA and were willing to be educated on how to diagnose and report child abuse cases (81.5, 78.7 %, respectively).

Conclusions There were considerable disparities in respondents' knowledge and attitudes regarding the occurrence, signs of suspected cases, risk factors and reporting of CPA. Despite being aware of such cases, only a handful was reported. Enhancement in the education of Malaysian dental health care providers on recognising and reporting CPA is recommended.

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Introduction

Child abuse is recognised globally as a major public health issue. In recent years, Malaysian communities have become increasingly aware of this problem, and formal reports of child abuse cases have increased (Ahmed et al. 2015). Child physical abuse (CPA) is a part of the spectrum of child abuse, which is now recognised as a worldwide issue and has been reported by numerous countries

(Welbury 2007; Cukovic-Bagic et al. 2013). Despite this global awareness, data on the incidence of CPA are lacking in many nations; many researchers from different cultures are attempting to fill this gap. Management and protection strategies are as diverse as the countries that generate them. Therefore, it is to be expected that culture, attitudes and behaviour have an effect on the identification, reporting and prevention of child abuse (D'Antonio et al. 1993; Al-Jundi et al. 2010).

Many studies have reported that the head and orofacial region are common sites of trauma from child abuse, and this is an area that dentists routinely assess. For this reason, dentists and the members of dental team are in a strategic position to recognise and report suspected cases (Welbury and Murphy 1998; Cairns et al. 2005a; Cukovic-Bagic et al. 2013, 2015).

Due to shortage of paediatric dental specialists to meet the need of child population in Malaysia, children's dental care is mostly provided by general dental practitioners (GDPs) and dental nurses. Dental nurses are clinical allied health personnel in Malaysia; they complement the dentists (Malaysia Ministry of Health Annual Report 2004; Oral Health Division 2005; Hussein et al. 2014).

As in most countries, Malaysian dentists and dental nurses are legally obliged to report any case indicating child abuse and neglect according to the Malaysian Law Child Act 2001. Numerous earlier international studies in the literature showed that despite their legal obligation, dentists and dental teams rarely report cases of suspected child abuse, most often because of a lack of knowledge and education regarding child abuse and neglect (Lazenbatt and Freeman 2006; Manea et al. 2007; Bankole et al. 2008; Owais et al. 2009; Uldum et al. 2010; Sonbol et al. 2012; Cukovic-Bagic et al. 2015). Other reasons include not knowing to whom to report or not knowing what to do when confronted with such cases (Welbury et al. 2003; Cairns et al. 2005b; Thomas et al. 2006).

In Malaysia, efforts to protect children from abuse have stressed the need to raise the knowledge and awareness of all health care providers as well as the public on this issue. It is worth mentioning that these efforts led to an increase in reported CPA cases from 146 reports in 2000 to 257 reports in 2010 (Sim & Wan-Yuen, 2011).

In spite of the importance of knowing the frequency of child abuse occurrence, the perception of dental health care providers regarding their experience and reporting CPA has not been assessed in Malaysia. Furthermore, such research about this global issue is important, because the views of dental health care providers in Malaysia would help the local health authorities in tailoring appropriate strategies for enforcement of child protection in Malaysia. Therefore, as a starting point, this study aimed to investigate the knowledge and attitudes regarding CPA cases in a group of

Malaysian dental health care providers and to describe their experiences associated with CPA.

Methods

Participants

The study population comprised paediatric dental specialists (PDs), general dental practitioners (GDPs), dental nurses (DNs) and Paediatric Dentistry postgraduate students (PGs) who attended the National Paediatric Dentistry Conference in Kuantan, Pahang, Malaysia (Malaysian Association of Paediatric Dentistry (MAPD) 3rd Biennial Scientific Meeting and Trade Exhibition) on 13–15th March 2015, and there were 158 participants. Approval for this study was obtained from the Human Ethics Committee of Universiti Teknologi MARA (UiTM) and the conference organiser.

A semi-structured questionnaire (modified from Al-Moosa et al. 2003; Al-Jundi et al. 2010) was used to assess the participants' perceptions regarding CPA. The questionnaire was validated in terms of applicability and repeatability by performing a pilot study amongst a group of practising GDPs and dental nurses working in UiTM and government dental clinics and revised accordingly. During the conference, the questionnaire with a covering letter describing the study aims was distributed to all participants. They were asked to fill in the questionnaire and return it before the end of the conference.

Survey instruments

The questionnaire was divided into five sections. The first section was on background, demographic, type and year in practice. The second section addressed participants' knowledge about identification of CPA and frequency of occurrence in their practice. The third section addressed participants' attitudes and perceived barriers to reporting child physical abuse. The participants were asked where to report and the reasons that prevented the reporting of any suspected cases of CPA. The fourth section assessed participants' knowledge about possible risk factors related to child physical abuse, where a variety of factors were given to the participants to select the appropriate one. The final section questioned participants' attitude towards receiving additional education and training regarding CPA in terms of diagnosis, reporting and management.

Data analysis

Data were entered into SPSS version 20.0 (SPSS Inc., Chicago, IL, USA). Analyses included basic descriptive

statistics [frequencies and mean \pm standard deviation (SD)] and bivariate analyses [Chi-square (χ^2)] were performed. Chi-square was used for nominal or ordinal variables. An alpha level of statistical significance was set at 0.05.

Results

Amongst the 158 potential respondents, 118 responses were received, of which 10 were excluded. Therefore, 108 participants were included with a response rate of 75 %. A variety of dental health care personnel were represented in this survey, and the distribution was: PDs = 37, PGs = 3, GDPs = 30, DNs = 38. Since PGs were only three, they were included in GDPs group (PDs = 37, GDPs = 33, DNs = 38).

The demographics and characteristics of the respondents are presented in Table 1. The mean age of respondents was 35.8 ± 7.865 years. Majority (83.8 %) were graduates

from local dental schools. The average time in practice was 12.6 ± 9.0 years.

Table 2 summarises the perceived attitudes and experiences of CPA reported by the respondents. Half of the respondents agreed that CPA is currently common in Malaysia (PDs = 51.4 %, GDPs = 48.5 %, DNs = 57.9 %). Additionally, they indicated that the trend of the frequency of occurrence of CPA is increasing in recent years (3–5 years) in Malaysia (PDs = 81.1 %, GDPs = 72.7 %, DNs = 50.0 %) with no significant differences between groups.

Varied views were expressed regarding the identification of signs of suspected CPA cases (Table 3). The presence of bruises on a child's cheek was the main sign for most dental health care providers regardless of their type of practice, followed by the presence of burns (PDs = 91.9 %, 86.5 %; GDPs = 69.7 %, 84.8 %; DNs = 65.8 %, 63.2 %, respectively). There were significant differences between the respondents with regards to

Table 1 Demographic characteristics of the participants according to their type of job

Characteristics	PDs N (%)	GDPs N (%)	DNs N (%)	Total
Gender				
Male	6 (16.21 %)	4 (12.12 %)	1 (2.63 %)	11
Female	31 (8.378 %)	29 (87.87 %)	37 (97 %)	97
Age				
≤ 30	4 (10.80 %)	20 (60.60 %)	1 (3 %)	25
31–40	12 (32.42 %)	7 (21.21 %)	1 (3 %)	20
41–50	11 (29.72 %)	4 (12.12 %)	1 (3 %)	16
≥ 51	2 (5.40 %)	0	0	2
Years in practice				
≤ 5	6 (16.21 %)	20 (60.60 %)	4 (11 %)	30
6–10	7 (18.91 %)	6 (18.18 %)	4 (11 %)	17
11–20	16 (43.42 %)	1 (3.03 %)	9 (24 %)	26
21–30	5 (13.51 %)	3 (9.09 %)	5 (13 %)	13
≥ 31	3 (8.10 %)	1 (3.03 %)	2 (5 %)	6
Type of practice				
Government				
Government hospital-based clinic	29 (78.37 %)	18 (54.54 %)	33 (87 %)	80
Government non-hospital-based clinic	0	8 (24.24 %)	4 (11 %)	12
Government university setting	7 (18.91 %)	4 (12.12 %)	0	11
Private				
Private clinic	0	3 (9.09 %)	0	3
Private university setting	1 (2.70 %)	0	0	1
MAPD membership				
Members	34 (91.89 %)	14 (42.42 %)	21 (55 %)	69
Non-members	3 (8.10 %)	19 (57.57 %)	17 (45 %)	39
Graduation place				
Local universities in Malaysia	27 (72.97 %)	27 (81.81 %)	8 (21 %)	62
Outside Malaysia	9 (24.32 %)	3 (9.09 %)	0	12

Table 2 Experience and perceived attitudes of the respondents about CPA in Malaysian children

	PDs N (%)	GDPs N (%)	DNs N (%)	All N (%)	χ^2	p value
How often have you suspected cases of CPA in your practice?						
Never	5 (13.5 %)	13 (39.4 %)	18 (47.4 %)	36 (33.3 %)	14.525	0.024
Rarely	27 (73.0 %)	16 (48.5 %)	13 (34.2 %)	56 (51.9 %)		
Occasionally	5 (13.5 %)	4 (12.1 %)	6 (15.8 %)	15 (13.9 %)		
Often	0	0	1 (2.6 %)	1 (0.9 %)		
What do you think of the frequency of occurrence of CPA in Malaysia?						
Rare/uncommon	8 (21.6 %)	8 (24.2 %)	9 (23.7 %)	25 (23.1 %)	2.327	0.852
Very common	6 (16.2 %)	4 (12.1 %)	5 (13.2 %)	15 (13.9 %)		
Common	19 (51.4 %)	16 (48.5 %)	22 (57.9 %)	57 (52.8 %)		
Do not know	4 (10.8 %)	5 (15.2 %)	2 (5.3 %)	11 (10.2 %)		
What do you think of the trend of the frequency of occurrence of CPA in recent years (3–5 years) in Malaysia?						
Increasing	30 (81.1 %)	24(72.7 %)	19 (50.0 %)	73 (67.6 %)	9.643	0.141
Decreasing	1 (2.7 %)	0	2 (5.3 %)	3 (2.8 %)		
About the same	1 (2.7 %)	2 (6.1 %)	5 (13.2 %)	8 (7.4 %)		
Not sure	5 (13.5 %)	7 (21.2 %)	11 (28.9 %)	23 (21.3 %)		

Number and % in the table represent those of YES answers only

Percentage per each subgroup calculated from the total number of its related group. Percentage for the overall sample calculated from the total number of the sample ($n = 108$)

CPA child physical abuse

Tables 3 Knowledge of Malaysian participants about identification of signs of suspected CPA

Signs of CPA	PDs N (%)	GDPs N (%)	DNs N (%)	All N (%)	χ^2	p value
Bruise on the cheek may indicate slapping or grabbing of the face	34 (91.9 %)	23 (69.7 %)	25 (65.8 %)	82 (75.9 %)	7.997	0.018
Additional bruises usually occur in areas overlying bony prominences in abuse victims	14 (37.8 %)	16 (48.5 %)	18 (47.4 %)	48 (44.4 %)	1.064	0.605
Repeated injury to the dentition resulting in avulsed teeth or discoloured teeth may indicate repeated trauma from abuse	21 (56.8 %)	19 (57.6 %)	17 (44.7 %)	57 (52.8 %)	1.576	0.466
Bruises noted around the neck are usually associated with non-accidental trauma	27 (73.0 %)	23 (69.7 %)	21 (55.3 %)	71 (65.7 %)	2.941	0.230
Burns are noted in many child abuse cases and they may have the shape of a heated object	32 (86.5 %)	28 (84.8 %)	24 (63.2 %)	84 (77.8 %)	7.277	0.026
Bite marks noted on a child's neck are frequently a component of child abuse	31 (83.8 %)	23 (69.7 %)	20 (52.6 %)	74 (68.5 %)	8.465	0.015
Teeth injuries are noted in some child abuse cases	22 (59.5 %)	18 (54.5 %)	14 (36.8 %)	54 (50.0 %)	4.229	0.121
Soft tissues injuries in the mouth (lip, tongue, gingiva)	27 (73.0 %)	16 (48.5 %)	24 (63.2 %)	67 (62.0 %)	4.473	0.107

Number and % in the table represent those of YES answers only

Percentage per each subgroup calculated from the total number of its related group. Percentage for the overall sample calculated from the total number of the sample ($n = 108$)

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their type of practice ($\chi^2 = 7.997$, $p = 0.018$; $\chi^2 = 7.272$, $p = 0.026$). Moreover, the presence of bite marks on child's neck was also cited by almost two-third of the respondents in each group (PDs = 83.8 %, GDPs = 69.7 %, DNs = 68.5 %) with significant differences between the groups ($\chi^2 = 8.465$, $p = 0.015$).

In terms of reporting a child abuse case and its barriers (Table 4), the majority agreed that it is legally required to report child abuse in Malaysia (PDs = 86.5 %, GDPs = 84.8 %, DNs = 78.9 %). However, only few of them stated that they have reported abuse cases (PDs = 24.3 %, GDPs = 3.0 %, DNs = 15.8 %). Lack of

Table 4 Knowledge and views of Malaysian participants about reporting of CPA and its barriers

	PDs N (%)	GDPs N (%)	DNs N (%)	All N (%)	χ^2	p value
Are you legally required to report child physical abuse in Malaysia?	32 (86.5 %)	28 (84.8 %)	30 (78.9 %)	90 (83.3 %)	0.846	0.655
Have you reported any physical abuse cases?	9 (24.3 %)	1 (3.0 %)	6 (15.8 %)	16 (14.8 %)	6.311	0.043
Where to report CPA case?						
The police station	17 (45.9 %)	16 (48.5 %)	13 (34.2 %)	46 (42.6 %)	1.731	0.421
Social department/family protection department	22 (59.5 %)	20 (60.6 %)	18 (47.4 %)	60 (55.6 %)	1.601	0.449
Head of department or the hospital manager	19 (51.4 %)	15 (45.5 %)	17 (44.7 %)	51 (47.2 %)	0.389	0.823
Try to talk to parents	8 (21.6 %)	5 (15.2 %)	6 (15.8 %)	19 (17.6 %)	0.635	0.728
Paediatric Department	7 (18.9 %)	1 (3.0 %)	1 (2.6 %)	9 (8.1 %)	8.263	0.016
Do not know	0	2 (6.1 %)	3 (7.9 %)	5 (4.6 %)	2.867	0.239
Just keep quiet	0	0	1 (2.6 %)	1 (0.9 %)	1.859	0.395
Others/SCAN TEAM	3 (8.1 %)	0	1 (2.6 %)	4 (3.6 %)	3.385	0.189
What is/are the reason/s for not reporting CPA cases?						
Not sure who to report it to	8 (21.6 %)	11 (33.3 %)	12 (31.6 %)	31 (28.7 %)	1.406	0.495
Not sure about the diagnosis	11 (29.7 %)	16 (48.5 %)	13 (34.2 %)	40 (37.0 %)	2.832	0.243
Lack of adequate history	18 (48.6 %)	15 (45.5 %)	14 (36.8 %)	47 (43.5 %)	1.136	0.567
Not sure whether reporting is legal	1 (2.7 %)	1 (3.0 %)	9 (23.7 %)	11 (10.2 %)	11.681	0.003
Did not want to get involved	5 (13.5 %)	5 (15.2 %)	11 (28.9 %)	21 (19.4 %)	3.410	0.182
Lack of knowledge about consequences of abuse	5 (13.5 %)	7 (21.2 %)	7 (18.4 %)	19 (17.6 %)	1.741	0.690
Others	4 (10.8 %)	1 (3.0 %)	0	5 (4.6 %)	5.238	0.073

Number and % in the table represent those of YES answers only

Percentage per each subgroup calculated from the total number of its related group. Percentage for the overall sample calculated from the total number of the sample ($n = 108$)

CPA child physical abuse, SCAN suspected child abuse and neglect team

adequate history was the main reason for not reporting by the respondents (PDs = 48.6 %, GDPs = 45.5 %, DNs = 36.8 %, respectively) followed by uncertainty about the diagnosis of abuse (PDs = 29.7 %, GDPs = 48.5 %, DNs = 34.2 %). Although lack of certainty regarding whether reporting is legal was the least reason for dentists (PDs = 2.7 %, GDPs = 3.0 %), it was cited by almost a quarter of DNs (23.7 %) with highly significant differences between the groups ($\chi^2 = 11.681$, $p = 0.003$). Regarding where to report, most respondents regardless of their practice type cited that they do report to social department or family protection department (PDs = 59.5 %, GDPs = 60.6 %, DNs = 47.4 %) followed by informing the head of department about any suspected case (PDs = 51.4 %, GDPs = 45.5 %, DNs = 44.7 %) with no significant differences between the groups.

Numerous potential risk factors in terms of child, parental and family factors were proposed to the participants, and most of them selected more than one

possible risk factor (Table 5). The majority postulated that maternal and family problems are the main risk factors of CPA (PDs = 94.6 %, GDPs = 93.9 %, DNs = 89.5 %, respectively). There were significant differences between dental health care providers in terms of parental substance abusers, domestic violence and unemployment as risk factors ($\chi^2 = 16.598$, $p = 0.001$; $\chi^2 = 13.689$, $p = 0.001$; $\chi^2 = 13.570$, $p = 0.001$, respectively).

Most respondents (PDs = 75.7 %, GDPs = 87.9 %, DNs = 90.0 %) stated that they did not obtain sufficient information on child abuse with significant difference between the groups ($\chi^2 = 16.680$, $p = 0.001$), and the majority (PDs = 97.3 %, GDPs = 90.9 %, DNs = 86.8 %) requested a training programme on CPA, particularly in fields related to its diagnosis and reporting (PDs = 83.8 %; 81.1 %, GDPs = 87.9 %; 84.8 %; DNs = 73.7 %; 71.1 %, respectively), with high significance amongst groups in terms of the diagnosis ($\chi^2 = 19.446$, $p = 0.001$) (Table 6).

Table 5 Knowledge of Malaysian general dentists about risk factors of CPA

Risk factors	PDs N (%)	GDPs N (%)	DNs N (%)	All N (%)	χ^2	<i>p</i> value
Child factors						
Child was unwanted at the time of pregnancy	30 (81.1)	25 (75.8)	25 (65.8)	80 (74.1)	2.353	0.308
Child is disabled	30 (81.1)	26 (78.8)	22 (57.9)	78 (72.2)	6.045	0.049
Child is orphan/adopt	29 (78.4)	24 (72.7)	22 (57.9)	75 (69.4)	3.948	0.139
Low birth weight/premature	4 (10.8)	3 (9.1)	4 (10.5)	11 (10.2)	0.064	0.969
Hyperactive child	30 (81.1)	24 (72.7)	25 (65.8)	79 (73.1)	2.236	0.327
Parental factors						
Parental substance abusers	34 (91.9)	27 (81.8)	20 (52.6)	81 (75.0)	16.589	0.001
Mental illness	30 (81.1)	28 (84.8)	26 (68.4)	84 (77.8)	3.113	0.211
Parents were themselves victims of abuse	29 (78.4)	23 (69.7)	24 (63.2)	76 (70.4)	2.093	0.351
Mother married at a young age or currently young	22 (59.5)	16 (48.5)	22 (57.9)	60 (55.6)	0.981	0.612
Low level of parents' education	20 (54.1)	21 (63.6)	19 (50.0)	60 (55.6)	1.382	0.501
Family factors						
Marital and family problems	35 (94.6)	31 (93.9)	34 (89.5)	100 (92.6)	0.842	0.656
Extreme poverty	22 (59.5)	23 (69.7)	16 (42.1)	61 (56.5)	5.673	0.059
Large family	15 (40.5)	16 (48.5)	16 (42.1)	47 (43.5)	0.496	0.781
Domestic violence	32 (86.5)	24 (72.7)	18 (47.4)	74 (68.5)	13.689	0.001
Unemployment	33 (89.2)	23 (69.7)	19 (50.0)	75 (69.4)	13.570	0.001

Number and % in the table represent those of YES answers only

Percentage per each subgroup calculated from the total number of its related group. Percentage for the overall sample calculated from the total number of the sample ($n = 108$)

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Furthermore, all respondents indicated that they received their information about CPA from many sources, including the Internet (PDs = 40.5 %; GDPs = 48.5 %; DNs = 73.7 %), continuing education development programmes (PDs = 64.9 %; GDPs = 39.4 %; DNs = 39.5 %), dental meetings and conferences (PDs = 48.6 %, GDPs = 24.2 %; DNs = 26.3 %), journals (PDs = 48.6 %, GDPs = 15.2 %; DNs = 10.5 %) and others, such as books and brochures (PDs = 27.0 %, GDPs = 18.2 %; DNs = 26.3 %). Continuing education development programmes were stated significantly more by PDs than GDPs and DNs ($\chi^2 = 16.989$, $p = 0.001$), whilst GDPs and DNs used the Internet as the main source for their information about CPA ($\chi^2 = 9.032$, $p = 0.011$) (Table 6).

Discussion

Understanding dental health care providers' knowledge, attitudes and reporting on this topic is essential to plan strategies to improve identifying and reporting of child abuse cases. To the best of our knowledge, this is the first local study of its kind in Malaysia and Southeast Asia that assessed dental health care providers' views on this global issue.

In this survey, half of the respondents considered that CPA occurrence is common in Malaysia and had increased recently, consistent with previous findings reported by Al-Moosa et al. (2003); Manea et al. (2007). These findings support the observation that physical abuse is more common and widely tolerated in Asia (UNICEF 2012; Ahmed et al. 2015).

Most respondents in this survey were found to have sufficient knowledge concerning common signs of physical abuse. For instance, two-thirds of the respondents were aware that bruises on the cheek, presence of burns on a child's face and hands as well as bite marks on a child's neck are common signs, similar to findings reported by Owais et al. (2009) and Al-Dabaan et al. (2014). However, half of the respondents recognised that the presence of bruises on overlying bony prominences and bruises around the neck are also associated with CPA. Recognising signs of physical abuse is a fundamental step in protecting any abused child.

Reasonable grounds for suspicion that a child has been abused justify the assessment and decision to report to bodies in charge, which means that even if the professional does not have sufficient information, he/she is still obliged to report the suspicion (Cukovic-Bagic et al. 2013). In this study, most respondents agreed that they are legally

Table 6 Views of participants about continuing education of CPA

	PDs N (%)	GDPs N (%)	DNs N (%)	All N (%)	χ^2	p value
Have you received any information on child abuse?	32 (86.5)	19 (57.6)	16 (42.1)	67 (62.0)	16.080	0.001
Where do you receive information on child abuse?						
Dental journals	18 (48.6)	5 (15.2)	4 (10.5)	27 (25.0)	16.989	0.001
Continuing education course	24 (64.9)	13 (39.4)	15 (39.5)	52 (48.1)	6.300	0.043
Dental meetings and conferences	18 (48.6)	8 (24.2)	10 (26.3)	36 (33.3)	5.975	0.050
Internet	15 (40.5)	16 (48.5)	28 (73.7)	59 (54.6)	9.032	0.011
Others/books/social media	10 (27.0)	6 (18.2)	10 (26.3)	26 (24.1)	0.908	0.635
Do you feel you are receiving enough information on child abuse/protection?	9 (24.3)	4 (12.1)	10 (26.3)	23 (21.3)	2.504	0.286
Would you like to have formal training on child abuse?	36 (97.3)	30 (90.9)	33 (86.8)	99 (91.7)	2.718	0.257
In which area/s do you think you need further training on child abuse?						
Recognition (diagnosis and investigation)	31 (83.8)	29 (87.9)	28 (73.7)	88 (81.5)	2.556	0.279
Reporting (how and to whom to report)	30 (81.1)	28 (84.8)	27 (71.1)	85 (78.7)	2.195	0.334
Management	26 (70.3)	26 (78.8)	23 (60.5)	75 (69.4)	2.794	0.247
Protection	25 (67.6)	21 (63.6)	21 (55.3)	67 (62.0)	1.257	0.533
How willing are you to receive training about child abuse/protection?						
Very willing	28 (75.7)	14 (42.4)	21 (55.3)	63 (58.3)	11.084	0.026
Willing	8 (21.6)	19 (57.6)	17 (44.7)	44 (40.7)		
Not interested	1 (2.7)	0	0	1 (0.9)		

Number and % in the table represent those of YES answers only

Percentage per each subgroup calculated from the total number of its related group. Percentage for the overall sample calculated from the total number of the sample ($n = 108$)

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required to report CPA in Malaysia, but only a few of them have reported such cases. Similar findings were reported by Manea et al. (2007), Owais et al. (2009), Uldum et al. (2010), Laud et al. (2013), Al-Dabban et al. (2014), Cukovic-Bagic et al. (2015), Deshpande et al. (2015).

The most common barriers for not detecting or reporting by the respondents were related to a lack of adequate history and uncertainty about recognition of abuse cases, which suggests that the respondents, in particular, GDPs and DNs receive insufficient or no training on how to identify and report child abuse cases during their dental school education. These findings are in agreement with other studies (Manea et al. 2007; Owais et al. 2009; Uldum et al. 2010; Laud et al. 2013; Al-Dabban et al. 2014; Cukovic-Bagic et al. 2015; Deshpande et al. 2015). The child abuse and neglect issue should be taught to dental students, dental nurse students and current dental practitioners and nurses to fulfil their professional, ethical and legal duties adequately (Cukovic-Bagic et al. 2013). Hence, the awareness of suspected child abuse and reporting should be integrated into the undergraduate curriculum in paediatric dentistry in Malaysia.

More than one risk factor for CPA was selected by the respondents. Mental illness of the parents and parental substance abuse were the main risk factors for abusing a

child. Research from Western countries suggests that children experience considerably higher rates of abuse when living in a family with a single parent, a step-parent or parents who have substance-abuse problems (Gilbert et al. 2009; Stoltenborgh et al. 2012). Moreover, family problems and loss of a job put the child at high risk for abuse. This is similar to the other studies (Youssef et al. 1998; Gillham et al. 1998; Sidebotham and Heron 2006; Hong et al. 2011) that provide evidence for the association between low socioeconomic status of parents and the likelihood of child maltreatment.

The majority of the respondents indicated that they had not received sufficient current information about CPA and requested additional information in this field. Moreover, a high level of interest amongst the respondents in training regarding CPA recognition and reporting was stated. This is similar to the findings from other studies (Manea et al. 2007; Uldum et al. 2010; Laud et al. 2013; Al-Dabban et al. 2014; Cukovic-Bagic et al. 2015), and this reflects a need to establish effective programmes concerning child protection which is in agreement with earlier studies. A lack of information or unfamiliarity with current global issues about CPA makes it difficult for dental professionals, specifically GDPs to assume an active role in detecting and reporting CPA and therefore protection of any abused child.

The information provided can be considered within the limitations of the study design. The apparent shortcoming is the relatively small number and that most participants are those who value paediatric oral health and are more socially aware since they are treating children. Also, concerning the self-reported aspects of the study, there is a possibility that social desirability biases may have led respondents to over- or under-report knowledge, attitude and experiences. However, the present study provides a reference database for broader surveys in Malaysia and Southeast Asia.

Conclusions

CPA is on the rise in Malaysia as reported by a group of Malaysian dental health care providers. There were considerable variations in their knowledge and views concerning diagnosis, risk factors and reporting of CPA cases. The majority of respondents indicated that they did not receive sufficient information about CPA and requested training on recognition and reporting of CPA. Further continuing education courses on this topic are recommended.

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Compliance with ethical standards

Funding This study was NOT funded.

Conflict of interest We declare that we have no conflict of interest.

Ethical approval All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration.

Informed consent Informed consent was obtained from all individual participants included in the study.

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